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LEAGUE OF NATIONS

COUNCIL COMMITTEE ON TECHNICAL CO-OPERATION
BETWEEN THE LEAGUE OF NATIONS AND CHINA

REPORT OF THE TECHNICAL AGENT OF THE COUNCIL
ON HIS MISSION IN CHINA

from the date of his appointment until April 1st, 1934

GENEVA 1934





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LIST OF DOCUMENTS MENTIONED IN THE REPORT.¹

1. Report of the National Economic Council, October 1933.
 2. Regulations governing the Organisation of the National Economic Council and of its Bureaux, Committees and Offices, 1934.
 3. Project of the National Economic Council for 1934 and Allocation of Funds.
 4. Report of a Survey of Certain Localities in Kiangsi, published by the National Economic Council, January 1934.
 5. Report on the Economic and Financial Situation of Chekiang Province, 1934.
 6. Agricultural Reform and Development in China, by Professor C. Dragoni, published by the National Economic Council, 1933.
 7. Summary Report on an Enquiry on the Re-organisation of Chinese Sericulture, by Signor Benito Mari, published by the National Economic Council, October 1933.
 8. Report of the National Health Administration on the Three-Year Plan, 1931-1934.
 9. Memorandum presented by the Ministry of Education to the Fourth Plenary Session of the National Economic Council, March 26th, 1934, following a Visit by M. Maurette.
 10. List of Major Enquiries at present being conducted on Agricultural and Industrial Topics, compiled by Dr. D. K. Lieu.
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¹ These documents, which contain supplementary information, are issued by the National Economic Council.

INTRODUCTION.

1. The Chinese Government presented, on June 28th, 1933, a communication to the Council of the League in regard to technical collaboration in the work of national reconstruction. This communication reads as follows :

“ The Council will recall that, at its session in May 1931, it has considered a telegram from the National Government of China dated April 25th, 1931, by which my Government indicated its decision to form a National Economic Council with the object of elaborating plans for national reconstruction and in which the collaboration of the technical organisations of the League was requested in the work of this Council.

“ The National Government at the same time outlined the principal measures which might be taken in order to give effect to such collaboration—namely :

“ 1. First, in the stage of first planning and organisation, the League might be able to send someone, as it has already done in the special domain of health work, for such limited period as might be practicable and convenient to the Government in order to help with his advice both as to the plan itself and as to any subsequent methods by which the League could assist it.

“ 2. Secondly, in the execution of particular projects, the League might, at the request of the Government, send or propose officers, representatives or experts who, apart from their own competence, could be in contact with the relevant technical organisation in Geneva.

“ 3. Thirdly, in appropriate special cases, a League Committee, whether a standing committee or one appointed *ad hoc*, might, at the request of the Government, help to frame or improve some particular scheme.

“ 4. Fourthly, the League might, in several ways, help in the training of China's own officers who will be required for the more extended work of later years. In the domain of health, the League has already been able to arrange for technical education in practical work in other countries, sometimes with the aid of Fellowships.

“ 5. In addition, the League might help the Government to find advisers to assist the development of the Chinese educational system and facilitate the intercourse between the centres of intellectual activity in China and abroad.

“ At its meeting on May 19th, 1931, the Council adopted these proposals of my Government and, at the same time, approved the suggestions of the Secretary-General regarding the methods of carrying out this collaboration. The Council

decided in particular, in regard to the first point of my Government's proposals, that :

““ The officer whose services are requested for such limited period as might be practicable and as might be convenient to the Government should be competent to give information on the working of the League's technical organisations and the manner in which they might be utilised by the Chinese Government. For this purpose, the Secretary-General considers that one of the Directors of the technical organisations should be authorised to pay a further visit to China . . . ’

“ and in regard to points (2), (3) and (4), the following :

““ Proposals for collaboration would be transmitted by the Secretary-General to the competent technical organisations for action, subject to the approval of the Council as required by the rules of procedure.’

“ During the two years that have elapsed since this Council decision, my Government has had the advantage of the collaboration of a certain number of experts from the League's technical organisations, whose work has been greatly appreciated. The Secretary-General has also been good enough at our request to recommend candidates for appointment to high posts in the Government service, and, finally, the Government has been able to rely on the assistance as ‘liaison’ agents of the League's technical organisations of two principal officers of the Secretariat who have rendered eminent services in this capacity during the few months of their activities in China, for which the Government desires to take this opportunity of thanking the Secretary-General and the Council.

“ I have the honour to inform the Council that, the preliminary work of survey having been made, the National Government, in view of the resources at its disposal, has decided as a beginning to carry into practice its national reconstruction work in a few provinces which will serve as models for the rest of the country.

“ It is clear that this work demands continued effort on the part of all who take part in it, as well as constant co-ordination of all the activities involved. The National Government would highly value measures which the Council might take in the present circumstances in order to ensure this continuous collaboration from the League with the National Government in its work of reconstruction, and, in particular, by the nomination for this purpose of a technical officer to be accredited to the National Government and its National Economic Council.

“ I should therefore be very grateful if the Council could presently examine the question which I have the honour to place before it on behalf of my Government, in order that its decision may be acted upon with as little delay as possible.”

2. At its meeting of June 30th, 1933, the Council decided to appoint a special committee to examine the action to be taken on the above communication of the Chinese Government. The Committee met in Paris on July 18th, 1933, and the resolution which it adopted was subsequently approved by the Council. The resolution stated :

“ The appointment of the technical agent requested by the Chinese Government is of a purely technical and entirely non-political character. In view of this fundamental principle, it is understood that the technical agent shall act as a technical liaison officer with the National Economic Council of China for the

purpose of technical co-operation with the competent organs of the League of Nations.

“ He shall hold office for one year. His salary and his travelling and subsistence expenses shall be defrayed by the Chinese Government.

“ The duties of the technical agent shall be :

“ (1) To supply information on the working of the technical organisations of the League and on the manner in which these organisations may be utilised for the purpose of co-operation in the reconstruction of China ;

“ (2) To transmit to the Secretary-General of the League of Nations, for submission to the competent organisation or organisations, any request for technical co-operation which he may receive from the Chinese Government ;

“ (3) To afford the Chinese Government such assistance as it may desire with a view to securing the co-operation of such experts as that Government might wish to engage for a technical service connected with the work of reconstruction, and,

“ (4) To assist the National Economic Council in co-ordinating on the spot the activities of the experts of the League's technical organisations.

“ The technical agent shall forward to the Council frequent statements regarding his work and a detailed report at least once every three months. This report shall also be communicated by the Secretary-General to such technical organisations of the League as have been called upon to co-operate at the Chinese Government's request.

“ The technical agent shall apply to the Secretary-General of the League with a view to securing the assistance of the technical sections and organisations in any enquiries he may have to carry out in the discharge of his duties as defined above.

“ It is understood that whenever the technical agent forwards statements and reports on his work to the League, copies thereof shall be sent at the same time to the National Economic Council of China.

“ The Committee of the Council appoints Dr. Rajchman, Director of the Health Section of the Secretariat, to act as technical delegate with the duties defined above.

“ In notifying the Council of its decisions, the Committee of the Council desires to state that it will in future remain at the Council's disposal for the purpose of :

“ (1) Considering any questions relating to the League's technical co-operation in the reconstruction of China that may be laid before the Council by the Chinese Government ;

“ (2) Examining the statements and reports received from the technical agent and discussing all questions relating to the discharge of his duties which the Committee may deem it desirable to consider.”

3. In execution of the mandate entrusted to me, and in conformity with the arrangement concluded with the Chinese Government, I arrived in China on October 3rd, 1933.

4. On October 4th, the Chinese National Government installed in office the Standing Committee of the National Economic Council, composed of the Prime Minister, M. Wang Ching-Wei; the President of the Legislative Yuan, Dr. Sun Fo; and the Minister of Finance, Dr. T. V. Soong; and, on the same day, defined the extent of the powers of this Committee.

5. Following the resignation of Dr. T. V. Soong as Minister of Finance, the Standing Committee on December 8th, 1933, was enlarged from three to five members by the addition of the new Minister of Finance, Dr. H. H. Kung, and the Chairman of the Military Affairs Commission, General Chiang Kai-shek.

6. The Standing Committee proceeded to a detailed study of the activities to be undertaken and financed during the year 1934, in addition to the work begun in 1931, which continued and developed without interruption.

7. On the completion of the preliminary study, a programme of collaboration with the League technical organisations was discussed with me, and I communicated it to the Secretary-General on December 30th, 1933.

In this communication, before outlining the proposals of the National Economic Council, I suggested that it should be a general principle to select as few technical experts as possible for service in China, and that these should either have had extensive experience in work in many countries or else should be prepared to remain for a considerable time in China, in order to become acquainted with local conditions. I indicated at the same time that the collaboration of the Health, Transit and Economic Organisations of the League with the Chinese Government was being prolonged in 1934, and that the two officers who were advising on the reconstruction of the Civil Service were continuing their studies.

The main proposals of the National Economic Council for 1934 were for improvement in communications, for water conservancy schemes and for the comprehensive reconstruction of certain rural areas.

It was felt that the programme of road construction had reached a point where consultation with engineers who had had experience in countries with conditions similar to those of China would be of undoubted value, particularly on the following problems :

- I. The best type of roads adapted to selected areas ;
- II. The methods of operating roads ;
- III. The available local fuel supplies ;
- IV. The most suitable types of vehicles and engines.

The Communications and Transit Organisation was therefore requested to make suitable arrangements for expert consultation in China. As regards water conservancy, the services of an experienced hydraulic engineer, particularly with considerable international experience, were requested in order to advise upon the general conduct of water conservancy policy.

I made the suggestion that the consultation asked for should be limited to not more than three outstanding specialists, who should be accompanied by the Director of the Communications and Transit Organisation when in China.

The Ministry of Education requested the League to send an authority on education to discuss the practical application of the proposals made by the Education Commission despatched to China two years ago by the Institute of Intellectual Co-operation, and of the Chinese group which paid a return visit to Europe in 1932. The Ministry desired the League, in making its selection, to choose a person who would be prepared to act as a permanent liaison officer in Europe between China and the Institute of Intellectual Co-operation. The duties of this officer would be to prepare technical studies for Chinese educational authorities visiting Europe ; to

seek out experts, at the request of the Chinese Government, for advising on particular educational reforms in China, and, in particular, to guide the studies of Chinese students abroad. The Council suggested that someone should be selected who had had experience in adapting educational policy to a general comprehensive policy of industrial reconstruction.

The National Economic Council attached great value to the agricultural survey made by Professor Dragoni in the winter of 1932-33, and was anxious that he should pay an early visit. If Professor Dragoni was unable to accept such an invitation, the Council asked for a list of names to be submitted of authorities who had had experience of the application of land reform in rural countries in Europe since the war, from whom it might select another outstanding specialist. It was requested that on the list there should also be included persons who had had experience in the activities and methods of economic councils in other countries, especially in Europe, the United States of America and the Union of Soviet Socialist Republics.

An enquiry was made as to whether Professor Parejas, who had spent two years at the Central University of Nanking on the nomination of the League, could place his services at the disposal of the National Geological Survey.

Finally, I reported that M. Mari, who had been placed by the Economic Committee of the League, in response to a request by the Chinese Government, at their disposal since 1932 for the improvement of sericulture, had joined, from January 1st, 1934, the foreign staff of the National Economic Council and that the nomination of a sericulturist with French experience was requested for a like service, it being understood that, in both cases, the League would bear a small part of the salaries.

8. As the consideration of plans of application was still in progress when the Council Committee on Technical Co-operation between the League of Nations and China met on January 10th, 1934, I asked leave of the Council to present a considered report at a later date, and had the honour to submit a preliminary statement on progress on January 4th, 1934. This communication stated :

“ The Council's decision to strengthen technical collaboration with China was welcomed by all Government leaders and caused general satisfaction in the several important centres of the country. The Standing Committee of the National Economic Council is now composed of the Prime Minister, the Commander-in-Chief, the Finance Minister and the President of the Legislative Yuan, with Mr. T. V. Soong as its leading member. The National Economic Council is receiving co-operation from responsible quarters in expectation of tangible results of its work. It is expected that arrangements will be made soon by which the work of the National Economic Council will be financed by proceeds of the American cotton and wheat loans. Plans for new reconstruction work are still under study, and meanwhile standing activities continue in the fields of road construction, hydraulic works, rural reconstruction, education and public health. Proposals of collaboration in the above fields with the League of Nations have been forwarded by me, together with relevant comments, to the Secretary-General for consideration by the competent technical organisations and sections of the Secretariat. I beg to request, however, that the Council allow me to present a considered report at a later date when, on the one hand, conclusions are available of the economic survey being carried out at present on behalf of the National Economic Council by foreign experts and Chinese technical officers, and, on the other hand, when a concrete plan has been effectively adopted by the National Government. Meanwhile communications will be, as in the past, regularly made to the technical organisations with regard to the several fields of continuous activity, the progress of which will be periodically reported to the Secretary-General.”

9. While the technical secretariat of the National Economic Council continued to carry out its work in the fields of health, road-building and, in part, of water conservancy as heretofore, local surveys, studies and investigations in relation to the new programme were being conducted by the Chinese and foreign members and visiting specialists. MM. Briand-Clausen and Stampar were closely associated with this work, as will be shown in detail on the following pages.

10. The programme for 1934 was finally adopted by the National Government and accepted by the plenary session of the National Economic Council on March 26th, 1934.

11. In the intervening period, the Secretary of the Council Committee and I were exchanging frequent communications regarding details of the collaboration of the technical organisations of the League in regard to the several fields of continuous activity and the arrangements for 1934.

Chapter I.

HISTORY OF THE NATIONAL ECONOMIC COUNCIL.

1. The decision to set up a National Economic Council was taken by the National Government of the Republic of China in May 1931. At that time, several months had elapsed since the end of major civil war, the flag of the National Government was flying in Central, Northern, and South-Western China, as well as in the four North-Eastern Provinces. The effects of the world economic crisis were not yet being felt in the country, and a period of peaceful development was generally expected. The early action on the decision of the League Council in regard to technical collaboration was requested from Nanking. The Educational Survey Group sent by the Committee on Intellectual Co-operation was on its way, and other technical agents were expected, when a flood of unprecedented magnitude occurred in the Yangtse Valley,¹ and the League, at the request of the Government, nominated one of its most experienced field workers, who was appointed on arrival to act as Director-General of the National Flood Relief Commission.²

At the same time, in the autumn of 1931, the economic crisis had become more acute in the chief industrial countries in the West, as was strikingly illustrated by the abandonment of the gold standard by the United Kingdom.

On September 18th, 1931, the Japanese forces opened hostilities in Mukden, and the attention of the Government was suddenly diverted from the emergency work in the Yangtse Valley and the task of organising central machinery for economic development, which was about to be begun.

2. Notwithstanding this situation, the National Economic Council was inaugurated on November 15th, 1931, in plenary session, and the then Chairman of the National Government, General Chiang Kai-shek, thus described the purpose of the Council in the inaugural address which he delivered as Chairman of the Council :

“ The constitution of the National Economic Council clearly shows that it was the desire of the National Government to create an Advisory Council in which the principal Ministers of the Government have associated with them private persons from outside, selected, not because of the position they hold, but because of their personal qualities and abilities, from amongst the leaders in the various forms of activities they perform. They are invited to help the Government in planning and executing an urgent development programme. The Council as a whole is thus an advisory board ; but, as far as the Ministerial members of the Council accept policies proposed, they will be, as members of the

¹ See quotation from the National Flood Relief Commission report in Chapter IV.

² Sir John Hope Simpson, formerly of the Indian Civil Service.

Government, in a position to give immediate executive effect to them. The archives of all the Ministries abound in schemes and proposals of all kinds. It will be the first task of the National Economic Council to translate into definite projects such of the schemes as will be selected as being the most urgent, to correlate them with one another, to establish an order of priority, and, in essence, to elaborate as rapidly as possible a co-ordinated plan of development for a first period of three years beginning in 1932 . . . In this respect, the Council will have the most responsible duties to perform. Article III of the Rules governing its organisation provides explicitly that 'all State projects for economic reconstruction or development for which the requisite funds are either borne or subsidised by the National Treasury must be first investigated and considered by the National Economic Council before submission to the National Government for approval'."

3. The hopes of an early systematic development of the National Economic Council's activities were disappointed when the extension of the hostilities in the North-Eastern Provinces and the continuation of the flood compelled the Government to devote its attention and resources elsewhere. Early in 1932, the capital had to be transferred to Loyang, far in the interior, and all but the most necessary work of government had to be suspended. The exceptional circumstances and the resulting violent dislocation of trade and the fall in revenue imposed a severe burden upon national finances; and, in addition, the country began, in 1932, to experience the full force of the world depression, from which, for a variety of reasons, it had until then been protected.

Nevertheless, the National Economic Council made a beginning with its reconstructive activities, which in certain respects were in continuation of the work of the National Flood Relief Commission—in particular, in the field of water conservancy. Dykes were strengthened on the Yangtse and Yellow Rivers and on three of the most troublesome rivers in Central China—the Han, Kan, and Hwai. Assistance was also given to conservancy work along the seashore of Northern Kiangsu.

In the field of road development and communications, the Council carried through two schemes for road building: the first in Kiangsu, Chekiang and Anhwei, provinces at the eastern end of the Yangtse Valley and under the immediate control of the Central Government; and the second, by the extension of the programme of the first to the four other provinces of the Yangtse Valley—Hupeh, Kiangsi, Hunan and Honan. The schemes were based on grants of advances to the provincial Governments of about 40 per cent of the cost of construction of selected roads, out of a Road Development Fund under the auspices of the Council. This policy, continued in 1933, resulted in some 13,000 kilometres of highway being completed by the end of the year.

The Council had taken over and adopted as its own the Three-Year Plan for the development of the health services, conceived as an instrument of rural reconstruction; and, in particular, the comprehensive scheme of establishing central guiding technical institutions in Nanking and of organising areas of field application was completed under its auspices. A central hospital and central field health station were established, and have not only undertaken the guidance of medical and public health activities, but also, in response to increasing requests from provincial and municipal Governments, have engaged in co-ordinating local health work.

The Council made surveys of the general situation of agriculture, special detailed studies of sericulture and of social conditions in certain provinces.

In the field of education, it assisted the National Ministry of Education in a number of comprehensive studies at home and abroad.

4. The work of the first two years continued in the atmosphere of the deepening economic depression and uncertainty caused by severe fighting with the Japanese troops, in isolated parts of the country, at first in the centre and then again in the north of China, and with the communist insurgents in South-West Central China. During this period, the League technical organisations continued their active co-operation.

Dr. B. Borcic, Director of the School of Hygiene at Zagreb, who had been acting since July 1930 as representative of the League's Health Organisation, was associated with the medical and sanitary emergency work necessitated by these various calamities.

In October 1931, there arrived a Commission of educational authorities, consisting of the late Dr. Carl Becker, formerly Prussian Minister of Education ; M. P. Langevin, Professor at the Collège de France ; M. M. Falski, formerly director of the Polish Ministry of Education ; and Mr. R. H. Tawney, of London University. This Commission was despatched by the International Institute of Intellectual Co-operation, and was accompanied by M. Bonnet, Director of the Institute, and Mr. Walters, representing the Secretary-General of the League. The Commission studied the educational system in China, and in its report, which was presented in July 1932, it made certain proposals for changes.

At the beginning of November 1931, Dr. Ciuca and Dr. T. F. Huang, members of the Health Section of the League Secretariat, were sent for periods of three and six months respectively for urgent preventive and medical work in connection with flood relief. Dr. Ciuca made, in particular, a survey of the malaria situation in the Yangste Valley, and Dr. Huang was in charge of medical relief at Hankow. Late in November, Dr. A. Stampar, Member of the League's Health Committee, joined them in anti-epidemic work for a period of several months.

At the beginning of December, at the request of the Minister of Public Instruction and with the financial support of the League of Nations, three Professors—M. Parejas, Professor of Geology at the University of Geneva ; Dr. Wissmann, of the University of Vienna ; and Mr. Davy, Reader in English Literature at Nottingham University—were placed at the disposal of the National Central University of Nanking for the academic years 1931-32 and 1932-33.

In January 1932, two engineers representing the organisation for Communications and Transit of the League—M. Okecki, Ministerial Adviser to the Ministry of Public Works at Warsaw, and M. Bourdrez, a specialist on hydraulic questions—were placed at the disposal of, and have since been closely collaborating with, the technical bureaux of the National Economic Council.

In the same month of January 1932, in fulfilment of a request made by the Chinese Government to the Communications and Transit Organisation of the League, a Commission of three hydraulic engineers, consisting of Mr. Coode, a member of the London Institute of Civil Engineers ; M. Perrier, Inspector-General of Roads and Bridges, Paris ; and Herr Sieveking, Director at the Hamburg Port Administration, arrived to study certain problems connected with the Hwai River, the port of Shanghai, and the rivers of North China. Their recommendations are described in the chapter on the water conservancy work of the National Economic Council.

In October 1932, Professor Carlo Dragoni, formerly Secretary-General of the International Institute of Agriculture at Rome, undertook, in response to a request of the Chinese Government and at the nomination of the Economic Committee of the League, a six months' study of the conditions of Chinese agriculture, and presented, in 1933, a report on the subject to the National Economic Council.

In the same month, M. Benito Mari, former Chairman of the Italian Association of Sericulture, was nominated by the Economic Committee of the League, at the request of the Chinese Government, to make a study of sericulture in China, and to examine the possibilities of its rehabilitation, and has been collaborating with the National Economic Council in this capacity until December 1933, when he joined the staff of the Council.

From March 1933, M. Charron, of the Economic and Financial Section of the League of Nations, at the request of the Chairman of the National Economic Council, spent six weeks in China discussing problems connected with the preparatory work for the Monetary and Economic Conference and in response to the request to co-ordinate the activities in China of the various League specialists.

In May 1933, Dr. Muehlens, of the Hamburg Institute of Tropical Diseases, a member of the League's Malaria Commission, undertook an enquiry on the frequency of malaria and made recommendations as to the prophylactic measures to be taken.

Later in the year, Dr. Stampar, formerly Director of Public Health at the Ministry of Social Assistance and Public Health, Belgrade, was despatched by the Health Section, and M. Briand-Clausen, Secretary of the Danish Agricultural Council, by the Economic and Financial Section, in response to the new plan of collaboration inaugurated by the Council Committee's decision of July 18th, 1933.

In addition, the Directors of the Health and of the Communications and Transit Sections of the League Secretariat acted as technical liaison officers from September 10th to December 26th, 1931, and from January to August 1932 respectively.

5. In the spring of 1933, the convocation of the Monetary and Economic Conference in London aroused hopes of an early concerted effort to devise international agreement and consequent action likely to contribute towards an early solution of the world economic and financial crisis. The Chinese Government responded in April to the invitation of the President of the United States of America by commissioning Dr. T. V. Soong, Vice-President of the Executive Yuan (then Minister of Finance), acting chairman of the National Economic Council, to consult with the United States Government and to lead the Chinese delegation at the London Conference. The financial arrangements entered into in May 1933, between the Chinese Government and the Reconstruction Finance Corporation of the United States, inaugurated a series of consultations with delegations to the Monetary and Economic Conference and leaders of industrial countries, with a view to studying the prospects of co-operation in the field of economic development. At the same time, the Chinese Government entered into an agreement with the Council of the League for technical collaboration on the terms and conditions stated above.

6. The National Economic Council was to be the agent of the Government in carrying out the contemplated activity, and the membership of its Standing Committee was accordingly entrusted to the Prime Minister, the Chairman of the Military Commission, the Minister of Finance, the President of the Legislative Yuan and Dr. T. V. Soong. The National Economic Council itself consists of the Minister of the Interior, the Minister of Finance, the Minister of Railways, the Minister of Communications, the Minister of Industries, the Minister of Education, and of unofficial members designated by the Government so as to ensure the participation of intellectual, industrial, and other circles.

The powers of the Council are :

- (1) To plan, examine and approve projects for economic reconstruction or developments ;
- (2) To examine and approve the necessary expenditure required for the execution of projects for economic reconstruction or development ;

(3) To supervise and direct projects for economic reconstruction or development ;

(4) To execute directly special projects for economic reconstruction or development.

These powers are very wide, and define, in conformity with modern legislative practice in China, the ultimate rôle which the institution is intended to play, rather than its status during the period of its development. The supervision of the execution of the Council's projects is entrusted to bureaux, committees and autonomous bodies. A committee acts in an advisory capacity to the Council ; a bureau is an executive body of the Council's secretariat ; while an autonomous commission composed of representatives of organised interests in a given sphere of activity is presided over by an independent chairman selected from amongst leaders in public life. Such a commission, once its programme is adopted by the Council, is to receive power to prosecute it, obtaining through the Council the necessary political and financial support for the realisation of its plans.

At the beginning, the Council was advised by committees created *ad hoc* in devising the policy in regard to public roads, water conservancy, public health, and education. It is the policy of the Council to establish a secretarial bureau only when it is needed for the purpose of a specific activity. At present there exists : (1) A bureau of the Chief Secretary, to which, besides an administrative and technical staff, there are attached eight expert advisers on matters connected with agriculture, hydraulics, industrial chemistry, commerce, fishery, and mining ; a foreign staff of six advisers is also attached to the bureau ; (2) a bureau of public roads ; (3) a central field health station ; (4) bureaux of activities in the field (including agriculture and water conservancy).

The continuous work of the Council clearly must be based on economic intelligence, but, being desirous to avoid overlapping and to utilise existing institutions, the Council refrained from creating a special service for the purpose. Instead, it appointed a Standing Advisory Committee, under the chairmanship of the Secretary-General of the Academia Sinica, and composed of its own Chief Secretary, the Director-General of the National Geological Survey, and the Director of the comprehensive studies and investigations conducted systematically under the authority of the National Government as a whole. To this Committee, all the technical work and plans of the Council are referred for advice, while the studies decided upon are distributed among the component institutions or entrusted to specialists selected by this Committee.

With the appointment of the autonomous commissions, the Council decided to proceed slowly and experimentally, and, so far, has constituted only one for the improvement of silk and another for the rationalisation of the cotton industry.

7. The expenditure of the Council since 1931 and until the end of September 1933 has totalled \$4,550,000, this sum being provided by the National Government.

8. The work accomplished by the National Economic Council during its preparatory period may now be examined in greater detail, and also its prospects and policy for the near future, starting in 1934.

Chapter II.

AGRICULTURE.

1. Following the conclusion of a financial arrangement with the Reconstruction Finance Corporation of the United States, and the determination of the Chinese Government to utilise the proceeds for national reconstruction, a number of provincial Governments, Ministries of the Central Government, and private agencies interested in industrial development applied for subsidies or loans for projects of reconstructive work. Requests for assistance amounted to more than four hundred million Chinese dollars, and, of this sum, more than half was for projects associated with the improvement of agriculture (including hydraulic and irrigation work). Other projects were for railway construction, the erection of factories (for various purposes), the development of fisheries, the improvement of the merchant marine, posts, telegraphs and telephones, and the extension of elementary education in rural areas. Most of the provincial Governments making proposals submitted detailed budgets.

2. The projects were carefully examined, and it was found that in some cases they related to work which was already in progress.¹ Some, on the other hand, were schemes fully prepared but not yet undertaken; and some were ideas only, many of them of considerable interest but not elaborated into concrete plans. After due consideration, the Standing Committee of the National Economic Council decided that, while prepared to give help and technical advice to the provincial Governments in the practical working out of their plans, and to continue its activities in road construction and in public health in the provinces in which it had previously been operating, it would confine its assistance to comprehensive regional reconstruction in two areas, one in the north-west, the other in Kiangsi.

3. The north-west (though undeveloped) and the Province of Kiangsi are both agricultural areas, and the decision to concentrate upon them is, in part, due to the acuteness of the agrarian situation. The depressed state of agriculture has attracted national attention, and investigations of great value have been carried out by many Government commissions, public institutions and private persons. The list of the major enquiries recently completed and now being conducted will be found in document No. 10 (see page 4). The first publication of the National Economic Council comprises a survey of the agricultural problems by Professor Dragoni, who made a report to the National Economic Council early in 1933. Surveys made under the auspices of the National Economic Council in the provinces of Kiangsi and Chekiang in November and December 1933 and January 1934 also helped to clarify the present position. The study in Kiangsi was made chiefly by the National Economic Council technical staff, Chinese and foreign, together with the two representatives of the League organisations, M. Briand-Clausen for agriculture and

¹ In Kansu and Shensi, for example, irrigation work for which subsidies were asked was already in progress.

Dr. Stampar for health and rural reconstruction. The studies in Chekiang were undertaken under the chairmanship of Sir Arthur Salter, whose group included Professor Franklin Ho, a leading economist, of the Nankai University, Tientsin, and Herr Otto Klepper, formerly Finance Minister of Prussia and at present studying problems of rural economy at the invitation of the National Economic Council. An analysis of the reports presented by Professor Dragoni, as well as the text of the reports on Kiangsi and Chekiang, are published separately (see page 4).

It should be added that several reports by M. Benito Mari have, in addition to his particular investigation, thrown light upon other more general problems of rural economy.

4. All studies agree that the fundamental factors in the situation are the low output of Chinese agriculture; the very high cost of credit facilities; the burden of taxation, particularly of surtaxes; and, in large parts of the country, the harsh and uneconomic system of land tenure.

The report relating to Chekiang shows that, even in a normal year, this province, which is predominantly agricultural, did not produce sufficient food for its own needs, and imported rice from other provinces and from abroad. A high density of population is partly responsible for this anomaly; on the other hand, it appears to be established that, not only the productivity per head, but also the absolute productivity of the land is on a low level in China.

Table (quoted from Professor Dragoni's Reports, pages 69-72.)

Country	Crop averages, 1918-1931 (in quintals of 100 kg. per hectare.)			
	Wheat	Rice	Maize	Cotton
Germany	21.0	—	—	—
Denmark	29.2	—	—	—
France	14.2	—	—	—
Hungary	13.8	—	—	—
Italy	13.3	46.4	15.2	—
Poland	12.8	—	—	—
U.S.S.R.	7.6	—	—	—
Canada	10.9	—	—	—
United States of America	9.9	23.2	15.5	1.8
Japan	16.0	34.2	—	—
India	7.1	14.9	—	—
Egypt.	17.7	30.1	22.6	4.5
China	7.3	18.9	9.7	1.9

5. This low productivity is due, in part, to technical and, in part, to social and economic conditions of land cultivation. Technical opinion in China supports the view, expounded in the Dragoni report, that seeds best adapted to the condition of the country are not widely used, nor are artificial fertilisers used in sufficient quantities. Rotation of crops follows ancient practice and habits, and the scientific control of animal disease and insect pests is not adequate. Animal husbandry, practically unknown south of the Yangtse, would certainly improve the farmer's standard of living. An improvement in the primitive implements used by farmers, which require an excessive expenditure of human labour, is also an urgent need. A number of research stations, both national and provincial, are experimenting with and improving the seeds of the staple crops; but, while it is possible to devise ways of improving the technical conditions of farming, it is not easy to bring the improvements to the attention of the farmer or to persuade him to adopt them, particularly as co-operative societies are still relatively undeveloped.

6. Of the economic and social factors, perhaps the system of tenancy is the most disquieting. The system of land tenure has been the subject of intensive study in China, by special commissions of the National Government, by the Chinese Land Economic Association, by national and private universities and institutions, and, finally, by the technical staff of the National Economic Council. It would appear that, while there are few landowners on a very large scale, as in certain European and American countries, the system of tenancy is, south of the Yellow River, the predominant one. In the Yellow River Basin and in the North (Shensi, Shansi, Hopei, Shantung and Honan), 69 per cent of the cultivators are owners of their land, 18 per cent own a part of their land and rent the remainder, and 13 per cent are tenants. On the other hand, in the Yangtse River Basin and in the South, which includes 61 per cent of the total population, tenancy is the most frequent form of tenure; 40 per cent of farmers are full tenants, 28 per cent are part tenants, and only 32 per cent own their land.¹ In certain provinces, the proportion of tenants is much higher. In Fukien, for example, it is 69 per cent, and only 9 per cent of the cultivators are owners. The number of tenants is on the increase, since owner-farmers are being forced, because of the depression and the decline of agriculture, to sell their land or to mortgage it on such terms as to leave them little better off than tenants. As a rule, the new owners are absentees, and frequently merchants or officials.

This state of affairs is aggravated by the conditions of tenancy. The forms of land tenure vary widely. Cash payments of rent appear in most districts to be the least usual, and payments in kind, either of a fixed amount or of a fixed share of the farm produce, are the rule. The landlord formerly contributed, and in parts of the country still does so, a part of the farmer's capital in the form of seeds, and in rare cases of live-stock and implements. So great are the complications of the various systems that it is hard to arrive at any exact conclusions as to the scale of rents.²

¹ These figures have been compiled by Professor Franklin Ho, of Nankai University, from information supplied by the Legislative Yuan's Bureau of Statistics.

A table showing the extent of tenancy in twelve provinces is given by Dr. C. K. Ping in his article "Bodenreform in China" in the *Jahrbuch der Bodenreform*, Vol. 19, No. 4.

Province	Peasant owners Per cent	Mixed Per cent	Tenants Per cent
Kiangsu	38	30	32
Anhwei	28	17	55
Hupei	22	27	51
Szechuen	22	21	57
Yunnan	46	26	28
Kweichow	46	19	35
Hunan	34	32	34
Kiangsi	27	34	39
Chekiang	27	31	42
Fukien	9	22	69
Kwangtung	30	24	46
Kwangsi	34	15	31
Average	32	25	43

² Professor Franklin Ho, a very prudent economist, estimates, in a study made in Chekiang for the Institute of Research in Social Science in 1928 (since when rents have been steadily rising), that the farmer paid 45 per cent of his produce to his landlord. It is the custom, in some provinces, to pay only according to the basic crops produced; but, in others, [the share is calculated out of the total produce of the farm, both by-products and main products. This figure should be increased, since it did not include deposits paid by the tenants (and not as a rule recovered), presents which it is customary to make to the landlord, and payments for the transportation (sometimes amounting to an extra 8 per cent on the rent) of the produce to the landlord's farm or agency.

The studies which have been made in Chekiang and Kiangsi and by Professor Dragoni suggest, however, that the level is surprisingly high. Some striking cases of abuse are mentioned in the Kiangsi report, of which the following is typical :

“ After repeated questioning, a tenant who was a member of a co-operative society stated that, out of 17 piculs which he harvested, he had to hand over 11 piculs to his landlord . . . It was stated by the tenants in a few cases that, even when harvests were poor, a fixed sum of money still had to be paid as rent, and a competent Chinese observer who travelled extensively in the province states that he knows of some few cases where tenants are obliged to repay to the landlords ten times as much seed as was lent to them ” (Kiangsi report, pages 8 and 9).

In three or four provinces, notably in Chekiang, attempts have been made to lower the height of rents (or to prevent them from rising still further) by legal means. The report relating to the economic condition of the Chekiang Province states in this connection :

“ Chekiang has gone further than any other province in attempting compulsory rent restriction. The standard is a 25 per cent reduction to a maximum 50 per cent of production—that is (with some exceptions), the legal maximum rent is 37 per cent, or just over one-third of the tenant's production as rent, out of which the landlord defrays the taxes.

“ It is difficult to ascertain just how far this legal requirement has been made operative. It is said that in many cases it is not applied (rents sometimes rising to 60 per cent or even higher); that the legal machinery to settle disputes and enforce the law is inadequate; that the landlord, exacerbated by the law, has other ways of compensating himself at the expense of the tenant; and that the benefit of rent reduction is exploited by the Peasants' Union (which, formed originally to enforce rent reduction, has too often become a new instrument of exaction), so that the tenant retains little advantage himself. Nevertheless, the measure represents perhaps the most satisfactory and the most successful experiment yet made in China in alleviating the position of the tenant. If the machinery for enforcement can be made effective, and the tenant relieved of supplementary exactions, one-third of the produce as a maximum rent would seem to be satisfactory.”

Closely related to the problem of tenancy is that of the small size of holdings. The landowner, as a rule, neither cultivates his property on a plantation system nor lets it out in large blocks.¹ The inconvenience of these small units, from a technical point of view, is increased by the fact that a part of the land (as much as 8 per cent in some districts) is occupied by graves, and that the scanty holdings of a farmer are not compact, but are split into fragments. The strip system prevails, the farmer

¹ The average size of farms, according to Professor Dragoni, appears to be less than five acres (Professor Dragoni's report, page 19). For Chekiang, Professor Franklin Ho gives the following table :

Size of farm in mow (1 acre = 6 mow)	Percentage of farms
Below 5	38.5
6 to 10	33.0
11 to 25	21.0
26 to 50	7.0
51 to 100	0.2
Total	99.7

cultivating a number of diminutive pieces of land, often of an inconvenient shape and situated at some distance from each other.

7. Another burden, besides the system of tenure, which weighs heavily upon agriculture, is the land tax. This tax was based on an assessment made over two hundred years ago, and in the course of time has become obsolete and anomalous; nevertheless, it is moderate. However, during the last few years, the tax has, in many provinces, been multiplied several times by the imposition of surtaxes. Though legally payable by the landowner, the tax appears, in many cases where tenancy prevails, to be paid in whole or in part by the tenant. In Kansu it was discovered, for example, that the tenant paid 60 per cent of the tax and the surtaxes. It is not possible to give any figures for the whole of China demonstrating the burden which this tax causes, since conditions vary from one province to another. A careful study was made (by the group of the National Economic Council) of the methods of collection, amounts paid and amounts received by the provincial Government. The results are enumerated in the introduction to the report :

“ The old land tax, with all its faults, would by itself, if legally applied without additional charges or exactions, contribute no undue burden. The features of land taxation which make it a central factor in agricultural distress are (a) the surcharges, (b) the inequalities between different regions, (c) the system of tax collection, with the waste and exaction that it involves.

“ Surcharges in Chekiang are a recent phenomenon. They have nearly all come into existence since 1927. They now range from 29 to 30 per cent in the different Hsiens, and they are extremely unequal in incidence, falling much more heavily on the poorer localities. In five relatively rich Hsiens taken at random, for example, the surcharges were found, on the average, to involve an excess over the land tax of only 25 per cent. In five relatively poor Hsiens, the average excess involved was over 350 per cent.

“ Among the first five, the total land taxation only, amounted in one case to over 65 cents a mow; among the latter, it averaged over \$1, and in one Hsien reached \$2.80.

“ With such gross inequalities, a general average is difficult to find, and would be misleading if given.

“ But even these inequalities, and these locally excessive legal charges, might, in most cases, be tolerable, though unjust, if they represented all that the peasant had to pay. Unhappily, the system of tax collection leads to additional exactions, which add greatly to the real burden of taxation, admits of evasion on a large scale, especially on the part of those best able to pay, and results in a great loss of revenue (or alternatively of an opportunity for substantial reduction of tax rates). At the crucial point of the intricate chain of tax-collecting stand, as elsewhere in China, the unofficial registrars with their books of ‘ fish scale ’, transmitted from father to son, as the only record of taxable owners and proprietors . . . It is impossible to estimate what this system involves in evasion and extortion. But all the evidence suggests that both are on a very large scale indeed. In many districts, the small landowner is both confused and overwhelmed by the multiplicity of exactions, legal and illegal . . . The farmer’s case is the harder because so much of the expenditure brings him no visible benefits. The surcharges are mainly for ‘ safety ’ (but the benefits to himself of military expenditure are not very visible to the peasant); ‘ education ’ (but the money is raised almost wholly from the land and spent disproportionately in Hangchow and the larger towns); and ‘ reconstruction ’ (mainly railways

which only serve a few areas, and roads which are scarcely used by the peasant, and mean for him land confiscation as well as taxation).

"Land tax is, of course, in any country where economic conditions resemble those of China, the main source of provincial revenues. And, heavy as are the burdens of land taxation in Chekiang, the total revenue shown in the accounts as received would probably not necessitate an excessive burden if it were equally and inexpensively collected without large evasion, misappropriated exactions and grossly disproportionate incidence in different districts. With an efficient system of collection, reductions in rates could be made and at the same time the revenue maintained or even increased.

"But such a reform must be immensely difficult, lengthy and, in its initial stages, expensive. It would require a radical administrative re-organisation and an adequate survey of land and of ownership, kept up to date by registration of sales . . . Such a fundamental reform of the land system must be a lengthy business, extending over a number of years. And some reform is urgent. The first necessities are simplification, equalisation and reduction, and a removal, or at least mitigation, of some of the worst anomalies of assessment."

8. Whether rents and taxes are tolerable depends in some degree upon the strength of the farmer to sustain them. In China, the labour of the farmer is not assisted by the provision of facilities for cheap credit or for marketing his crop advantageously, or for purchasing his necessities. It is difficult to obtain figures showing the rate of interest charged by rural moneylenders.¹ In many countries it has been found that the best way of dealing with such a situation is by the development of co-operative societies. But a co-operative movement, though it has been begun in certain provinces under the influence of such bodies as the Famine Relief Commission, and is actively supported by the Governments, is still in a rudimentary stage of development. In Kiangsi, for example, which has a population of 27,563,000, there are only about 10,000 members of these societies, most of whom are probably not active members. The Dragoni report gives the following tables showing the number of societies in China :

Table A. — CO-OPERATIVE ASSOCIATIONS CONSTITUTED IN 1925-1932
(CENTRAL STATISTICAL BUREAU).²

Percentages of the Total Numbers of Each Group.

	Credit	Consump- tion	Produc- tion	Market- ing	Purchas- ing	Other	Total
1925-1927 . . .	0.2	1.7	—	3.3	—	—	0.3
1928	3.7	4.3	0.9	—	—	—	3.3
1929	26.4	8.6	9.9	10.0	1.9	—	23.3
1930	25.7	22.2	14.9	20.0	17.3	57.1	24.9
1931	31.2	53.0	59.9	43.4	57.7	28.6	35.3
1932 (part) . .	12.8	10.2	14.4	23.3	23.1	14.3	12.9
	100.0	100.0	100.0	100.0	100.0	100.0	100.0

¹ Professor Dragoni came to the conclusion that the average was 35 per cent and that in some cases, not very rare, it reached more than 100 per cent.

² Professor Dragoni's report, pages 134 and 135.

Table B. — PERCENTAGE OF THE NUMBER OF SOCIETIES DIVIDED ACCORDING TO THE NUMBER OF THEIR MEMBERS.

Number of members	Credit	Consumption	Production	Utilisation	Marketing	Purchasing	Other	Total
1 to 25	69.5	23.7	43.6	66.2	31.2	69.3	14.3	64.5
26 to 50	23.5	17.2	33.3	26.3	31.9	15.4	—	23.9
51 to 75	3.6	0.9	10.3	4.5	15.6	11.5	71.4	4.0
76 to 100	1.5	9.9	6.3	0.7	6.3	—	—	2.4
More than 100..	1.0	33.6	5.4	2.3	11.9	3.8	14.3	3.5
Unknown	0.9	5.7	1.1	—	3.1	—	—	0.7
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

The management and organisation of the existing co-operative credit societies does not yet appear to have universally reached a high degree of efficiency.¹

Co-operative societies for marketing and buying are still fewer than credit societies, but are needed as much, if not more, than credit societies. The farmer is in a very poor bargaining position as against the merchant. This was pointed out in the report on the studies made last December in Kiangsi, a paragraph (page 10) of which may be quoted:

“In addition to his burdensome taxation and land-tenure conditions, the Kiangsi farmer is faced with a serious decline in the price of agricultural produce and an enormous discrepancy between prices which he can obtain locally and actual market prices in the large towns. According to figures furnished by the Provincial Reconstruction Bureau, the difference between prices paid to Kiangsi farmers for their produce and prices charged to consumers in Shanghai may amount to no less than 100 per cent. This question of middlemen's profits is regarded in official circles in the province as one of the most important problems in the work of rural reconstruction.”

Various provinces, notably Kiangsu, have attempted to deal with this problem by providing warehouses where the farmer can pledge his grain, thus enabling him to hold it off the market until he can obtain the most favourable prices.

9. Another adverse factor in farm economy is the absence of a cheap system of communications. When it was recently necessary on account of famine to transport wheat into the province of Shensi, it was found that the cost of transportation was forty times as great as it would have been upon a railway. The Government is, however, fully aware of the urgency of improving the system of communications.

10. Having received the various reports reviewing the situation of agriculture, the National Economic Council came to the decision to assist, both with financial and technical aid, the provincial Governments of Kiangsi and of Shensi and Kansu in comprehensive projects of rural rehabilitation.

¹ Some details will be found in the Kiangsi and Chekiang reports.

II. Kiangsi has for several years been the scene of guerilla warfare with Red troops. The Central Government concentrated its principal political and military forces in the province; a considerable part of national revenue goes to financing operations, military and political, in this area. The devastation and many-sided disturbances of social relationship consequent upon protracted civil war of the character described called for urgent measures of rehabilitation, and this explains the reasons which have led the Central Government to select this province for the field activities of the National Economic Council. As active policies still await determination, it will be pertinent to indicate the action proposed by the survey group; it relates to:

- I. Land tenure and taxation;
- II. Co-operative societies;
- III. Social welfare and amelioration.

I. Land Tenure and Taxation.

The fundamental factors in the Kiangsi situation which determine every aspect of the life of the province are the economic distress of the farmer and the despair and resentment which it causes.

The proposals made are on the assumption that, in view of the difficult situation so created, drastic measures are both necessary and desirable. These proposals include the conversion of the tenant-farmer into an owner-farmer, with full legal property in the land he tills. The type of rural society which would seem to correspond best with the needs of the population of the province is a society of farmer-owners, tilling and managing their own small or moderate-sized properties, with the aid of members of their own family or with a moderate supplement of hired labour, any large properties that may be worked by a great number of hired hands or leased out into tenancies being abolished, and tenancy itself being an exceptional arrangement arising only out of special conditions in the family or the character of the land.

The report recommends that, in providing for the general emancipation of the tenants, the procedure should be such that, while still making possible a few minor tenancy arrangements by small owners which might be to the convenience of all parties, it would, by giving each tenant a *prima facie* ownership, put upon every owner who is not tilling or managing the whole of his property the onus of proving his claim to continue his ownership as a small owner. The report of the Group of Experts indicates what should be the guiding lines for the contemplated reform.

The land-tax system is the core of the problem of rural distress, and no remedy can be effective until the whole system (including the method of collection) is reformed. After a short visit, the experts were unable to make detailed proposals on so intricate a problem, but they urge that it should be immediately studied with a view to action at an early date.

The introduction of a progressive land surtax as well as the reform of land taxation, as recommended above, are dependent on the quick carrying through of the work of land registration as already begun by the provincial Government.

Since the provincial Government has already started work in this field, the report suggests that it would be desirable to assist them both by subsidies and by lending them the necessary staff for this work. In view of the national importance of the land registration problem, such assistance, as recommended, may prove to be of the greatest value, not only for the Province of Kiangsi, but for the whole country.

II. *Co-operative Societies.*

The farmer's need of credit, and the terms on which he can obtain it, are almost as important to him as the taxation he pays and the tenure on which he holds his land.

In the absence of special assistance or organisation, the farmer has great difficulty in obtaining credit even for the short term between the time of sowing and that of harvest and sale ; and where he can obtain it he has to pay exorbitant rates of interest. This need has led to the establishment of some 300 such credit co-operative societies in Kiangsi. This co-operative movement has developed under the initiative and direction of two central organs—an office of the provincial Government and another of the Famine Relief Commission. These offices are in the same building ; but, since they act separately, some duplication of work and staff is involved. At the same time, the membership of the societies amounts to only about 10,000, and (with few exceptions) the societies are concerned only with the provision of credit. The co-operative purchase of farm implements and the sale of farm produce would, however, be of great benefit to the farmers, and the National Economic Council experts therefore consider that the societies could be usefully extended both in number and in the scope of their functions. Moreover, a central co-operative organisation for the province would be of great service to farmers by providing certain capital, plant or storehouses, which would enable produce to be disposed of on more favourable terms. They therefore propose :

- (1) The amalgamation of the two central organisations and the formation of a Central Co-operative Council, which, in addition to the general work of promoting and directing the co-operative movement, would establish small industrial plants ;
- (2) The extension of the existing co-operative societies ;
- (3) The formation of new buying and selling co-operatives.

III. *Social Welfare and Amelioration.*

There remains that vast field of work required for social welfare and amelioration of all kinds, in general and specialised education, in agricultural instruction, and as regards health.

For this purpose the report proposes :

(1) *The organisation and establishment of a Provincial Welfare Centre in Nanchang.* — This centre should be divided into a number of departments responsible for the following duties :

- (a) Mass education, and the education of true rural workers.
- (b) Agriculture : This department should serve to a greater extent the needs of practical agriculture as adapted to the needs of the farmer.
- (c) Health : This department (which might be named the Provincial Health Centre) should have special sections for laboratory examination and sanitary engineering, and for the establishment and management of a new model provincial hospital.
- (d) The new Co-operative Office, which has already been described, and for which provision has been proposed, might be regarded as a fourth department of the provincial centre.

The whole of the provision of \$560,000 under this section may be regarded as a capital investment involving no recurrent expenditure. Current expenses can be met from existing provincial funds.

(2) *The organisation and establishment of rural welfare centres in ten rural districts.* — These ten rural centres should be organised on the same lines as the provincial centre, and should serve as the local machinery for carrying out its work in the rural areas served.

They should each include among their work :

- (a) Mass education and a model elementary school ;
- (b) The establishment of a practical agricultural station, with a teacher who could provide practical courses for the farmers ;
- (c) Assistance in the formation and working of the co-operative societies, elsewhere proposed, in their respective districts ;
- (d) The organisation of health services, including, in particular, treatment of urgent sick cases, maternity work, sanitary engineering work (model wells, latrines and drainage, etc.) and health education.

(3) *Emergency help for the refugees and unemployed.* — Immediate help is required to feed and shelter the refugees and the unemployed, and to tend their health.

12. The reasons which dictated the selection of the north-west were different from those which determined the choice of Kiangsi. There, it is not so much a process of restoration that must be assisted as measures calculated to prevent recurrent famine and pestilence and provide a reasonable foundation for the development of a very large central area commanding communications between prosperous and less favourably situated provinces, and demarcating diverging types of agriculture and civilisations. In this area, population is scarce, land is plentiful and, if irrigated, its good quality yields adequate returns, two crops being harvested in a year. The country is mountainous, favourable for the plantation of forests and the rearing of horses, cattle and sheep ; in this respect, widely differing from South and Central China. The farmers are thrifty and hard-working. On the other hand, land and water communications are difficult, the rainfall is slight, irrigation works are undeveloped, and droughts are very severe. Cotton, grown in numerous varieties, needs rapid improvement. Afforestation methods are too primitive, and natural forests are neglected. Animal husbandry lags far behind, while animal disease is rife. Taxation is crushing, poppy cultivation occupies far too great an area, and, where irrigation does not extend its beneficial effects, the farmers lose their naturally progressive spirit, and lapse into despondency and a disordered way of life.

Recent studies inaugurated by the Railway Administration, the Geological Survey, the International Famine Relief Commission, and other agencies, facilitated the survey begun in February 1933 by the technical officers of the National Economic Council. Dr. Stampar, M. Bourdrez and M. Okecki are associated in the investigation of rural reconstruction, irrigation and road-building prospects in selected areas of the two provinces. The survey will last some six weeks, but work on roads and irrigation schemes has been already started. The irrigation operations are in Kansu, Shensi and Suiyuan, and had been partially carried out by the provincial Governments with the aid of loans from the International Famine Relief Commission. These are now being examined by the technical service of the National Economic Council.

It is understood that the Cotton Commission is interested in the progress of these operations, since, if irrigated, Shensi would be an eminently suitable centre for cotton cultivation.

The road linking up Shensi with Kansu was also started last year and will be completed in 1934. It receives full financial support from the National Economic Council to the extent of \$800,000, and traffic is to be operated on it under the auspices of the National Economic Council, for which purpose a sum of \$500,000 has been appropriated (see Chapter VI, § 11).

A road to the south-west is being prospected and its construction will begin shortly.

Health and maternity centres (of the type proposed for Kiangsi) will be established in several localities on the main lines of communication, and hospitals developed. A considerable effort is required to survey and control an endemic centre of pneumonic plague. Urgent measures are under study for the control of animal diseases, which have brought great loss to the farmers in the last few years.

This continued effort, if successful, would prevent disasters such as in the last three years have caused the loss of one and a half million sheep and half a million cattle. The maximum result would be to open up this vast area for the greater benefit of the national economy as a whole.

It is proposed to spend in all \$2,500,000.

13. It should be emphasised that, although the work which the National Economic Council is about to undertake in Kiangsi and the north-west is directed to improving the condition of agriculture, the Council is not the constitutional organ responsible for the nation's agricultural policy. That function belongs to the Ministry of Industries, which is charged with day-to-day administrative duties. The Ministry, in spite of having the responsibility simultaneously for agriculture, industry and commerce, has extensive agricultural interests. Besides its purely executive duties, it has organised a research bureau which, during the last two years, has carried out a number of surveys of practical value, notably on crop improvement and the prevention of animal disease. It has also organised a system of voluntary reporters, now numbering 6,000, who send in to the Ministry regular reports of local farm conditions. In addition, the enforcement of the Land Act of June 1930 falls within the Ministry's competence.

This Act represents the programme of desired future accomplishment rather than a code of actual practice. As indicating the goal of land reform in China, it is therefore of peculiar interest. The Act consists of about 400 articles, and covers nearly all aspects of the agrarian situation. Its general effect, if carried out, would be to change China from a country mainly of tenants, who, in comparison with the smallness of their holdings, pay very high rents, into one of small farmers, many of them owners, farming compact holdings. The most striking provision was that, where a tenant had cultivated his land for ten years, and the landlord was an absentee, the tenant would apparently, without any form of payment, become an owner. Moreover, the provincial authorities are given power, where they think fit, to impose a limit on the amount of land to be owned by any one person, and to expropriate, with or without compensation, all owners whose possessions are in excess of this limit. The general trend of the Act is, however, not to abolish the system of tenancy altogether, but to reform it and to protect the farmer against the landlord.

Provision is definitely made for a fixed rent. The limit is put at $37\frac{1}{2}$ per cent of the produce. The tenant is given reasonable security, and cannot be evicted unless he neglects to pay his rent or the landlord himself wishes to cultivate the farm. If the landlord wishes to sell, the farmer is to have a prior right of purchase. Upon

termination of a contract of tenancy, the tenant is to be compensated for improvements which he has made. Increase of crop produce, due to these improvements, is not to be counted in the calculation of the landlord's share.

One of the most interesting provisions is for the re-arrangement of strips into a compact holding. Provided that more than half of the farmers of a district do not object, this redistribution, with its resulting advantages, can be compulsorily carried out by the provincial authorities. Provision is made for the compensation of owners who suffer loss in the process of redistribution.

The law also provides for an improved system of land tax, including a periodical assessment, and one in which, according to modern custom, allowance is made in respect of improvements due to the investment of capital. By permitting the tenant to deduct the land tax from the rent where he himself has paid it, the incidence of the tax is made to fall on the landowner.

A central land office and a provincial land office are provided for. But this, together with other provisions of the Act, forms a programme for future accomplishment.

14. The application of more immediate administrative measures was called for by the exigencies of the provinces in the Yangtze Valley (Hupeh, Hunan, Honan, Anhwei and Kiangsi), which are under the special jurisdiction of General Headquarters. Prolonged civil disturbance in parts of these provinces, the eviction of landowners by the Communists, and their return when the areas were recovered from the Red armies, had produced a very difficult agrarian situation. Titles to land were in dispute; evidence of possession had been lost; part of the population was inclined to challenge the whole system of tenancy. To meet the situation and to restore ordered conditions, a number of regulations, mostly dealing with the manner of restoring landowners to their property, were issued by headquarters. A study of these provisions was made by Professor Dragoni at the Government's request, and will be found in his report.

15. The settlement of the special problems of Kiangsi should be regarded as only a part of the agrarian question in China. Conditions similar to those in that district exist, with some modifications, in most of the provinces south of the Yangtze. The increasing poverty of the farmer, the spread of undesirable forms of landholding, the flight of capital from the countryside and the decline of rural enterprise were reflected in a growing tension and a demand in some quarters for radical changes in the social system. Faced with this situation, the Government decided to appoint a new body, called the Rural Rehabilitation Commission.

16. The Commission was formed in May 1933, and consisted of the Ministers of Finance, Railways, and Industries, and of a number of eminent agriculturists and economists. One of the difficulties in determining the details of a land policy in China is the lack of accurate information about social and economic conditions. The Commission's work has therefore, up to the present, been exclusively one of enquiry and investigation. Through the members of Central Government services who are resident in the provinces, as well as the personnel of the Consolidated Tax Administration, it has conducted surveys in seven provinces, including Kwangsi, about which exceptionally little was previously known, and has received from these districts information about rents, land taxes, land tenure, types of soil and climate and crops, and the development of co-operative societies. The method of survey was to take a limited, but sufficient, number of Hsiens in each province, and to submit questionnaires to each householder, to the local authorities, and to the Hsien magistrate. The results of two of these surveys are now available in Chinese. Other surveys were carried out

of the tea, milk and cotton industries, all the processes, so far as agriculture was concerned, being minutely studied. An exchange of views was then held with the organs of the National Economic Council, which had been conducting enquiries on lines somewhat similar, and a report, with recommendations, is shortly to be published.

17. On the eve of the fourth plenary session of the Central Executive Committee, the highest constitutional organ, the following telegram was despatched by the Commander-in-Chief to the Executive Yuan. This significant document reads :

“ I have received President Wang's telegram of 17th inst. The so-called agrarian policy of the Red bandits is merely their weapon of war and nothing else. Young military commanders may at first be lured by the attractive propaganda of the Reds, but on further observation they always come to the conclusion that the so-called land policy of the bandits is sheer robbery. There are still some members of the party who are aggrieved at the failure of the Government to emulate and enforce such a land policy. Even if the Red bandits had a land policy, it would have to be determined by their political creeds. If we wanted to adopt their policy, we would have to discard our party principles and adopt a new name for our party like the Fukien insurgents. The land policy of the Red bandits is merely a strategic means, but it is not a political policy. At first the bandits may hold out the redistribution of land as a bait to the peasantry. Later, however, when their object is attained, they will so distribute the land that the more fertile plots will be given to members of their own party (the Communist Party), and the rest will be redistributed entirely on the basis of personal likes or dislikes. Moreover, the Red bandits also tolerate the system of vicarious farming, with the result that a new class of landowners soon rises to replace the old who have been ruthlessly murdered. In order to counteract the tendency on the part of the peasants to save and hoard the fruits of their labour, the Red bandits therefore often carry out their so-called farm-investigation movement, during which the new landowners are again dubbed 'rich or wealthy' and persecuted. When the land was first redistributed, the landowners and their families were often murdered. During the farm-investigation movement, the new landowners are subjected to severe persecution and their grain and belongings are taken away from them by force. This is done in order to get rid of personal ownership of land, and to prolong the period of 'Red pauperism' so as to force the poor to join the ranks of the Red bandits and fight their battles. Such being the strategic tactics of the bandits, many peasants have fallen victims of their cajolery. The consequences of such tactics have been most pathetic and terrible to the peasants, who often leave their farms and are later faced with starvation. To hide their intentions, the Reds have adopted the name of agrarian policy. Their crime is therefore ten thousand times more serious than that of those who masqueraded in Europe in the name of Liberty. Is our party's programme for the equalisation of land to be compared to this ?

“ The so-called agrarian policy is two-sided, dealing as it does with, firstly, the question of redistribution, and, secondly, the exploitation and readjustment of land. There is no lack of arable land in this country, which is more than sufficient for distribution among the population. Our land is, however, in urgent need of readjustment. Even in densely populated provinces, there are few landowners holding more than several hundred or several thousand mows of land, the majority being small landowners owning about thirty or forty mows. The question of exploitation and readjustment is therefore, in my opinion, more urgent than that of redistribution.

“ As regards the question of redistribution of land, it is the settled policy of the party to realise the system of equalisation of land-ownership. The ultimate object is to give land to all tillers of the soil. The exploitation and readjustment of the land should be carried out through co-operation and collective cultivation, so that rural revival may be realised. It is the settled policy of our party to oppose class strife. The redistribution of land should thus be achieved by peaceful means, so that all tillers of the soil may gradually be given their share of the land. According to the Regulations, promulgated last year by the Commander-in-Chief's Headquarters for the Honan-Hupeh-Anhwei Bandit-Suppression Forces, governing the readjustment of land, private ownership of land is recognised and protected. It is, however, subject to two restrictions—namely, (1) that landowners must give all persons in the village capable of tilling the soil an opportunity to work on their farms; and (2) that the maximum land holdings are to be limited; those holding land of an area in excess of the maximum limit are to be subject to graduated taxes. Revenue derived from these taxes is to be employed for financing agricultural enterprises. In this manner, not only will the landowners be induced to invest their capital in other than agricultural enterprises, but those capable of tilling the soil will be given land to cultivate, and bloodshed avoided. In order to insure sufficient land to the peasants, landowners, owner-farmers and peasants are encouraged to form co-operative societies for the exploitation of land. Whenever a piece of land in the village is offered for sale, these societies will be given the priority in acquiring such land. This will result in the gradual acquisition by these societies of all farms in the villages. Those who are not capable of tilling the soil will not be made members of the society, while those who are capable in this regard will be given land to cultivate until they choose to quit the society. At the same time, there will be no need for the sale or purchase of land, and all injustices in connection with the redistribution of land will be avoided. The farms acquired by the co-operative society will be distributed to members for cultivation, with ownership, however, remaining in the society. For this privilege, members are required to pay to the co-operative society a farm rent which will be used for the improvement of methods of cultivation. The organisation of such societies will thus not only facilitate the development and exploitation of the land, but also lead to the gradual elimination of persons who own but do not cultivate the land.

“ Moreover, the purchase of land by such societies is likely to be effected through loans from banking interests, so that the Government need not either, float loans or take forcible measures for the acquisition of the land. The redistribution of the land will also be determined by the societies themselves in accordance with the needs of their members, so that there will be no injustice, which is inevitable to the Soviet system. The exploitation and readjustment of the land may be so effected that co-operation and collective farming may be finally attained.

“ These plans have been enforced in the various bandit-suppression areas by the Bandit-Suppression Headquarters. Though they are not perfect, yet they are systematically devised and suit the conditions peculiar to the country. At least, they are practicable and may form the agrarian policy of our party. I have expressed these views on the land problem for the reference of our party comrades who are interested in the problem. I hope our comrades will not forget the stand of our party *vis-à-vis* this particular question, nor allow themselves to be misled by Communist propaganda regarding the so-called agrarian policy.

Not only will the success of these plans in the suppression of bandits depend on your efforts, but the future of the State and the party is also in your hands. Besides despatching this message expressing my views on the land problem, I will continue to report to you on conditions in the bandit-suppression areas at regular intervals. — CHIANG Chung-CHENG."

18. This telegram was followed by careful deliberations on the part of a special Committee of the Executive Yuan, appointed for the purpose of formulating a comprehensive land policy. In the course of its discussions, the Commission heard in evidence Sir Arthur Salter, Dr. Stampar and M. Briand-Clausen. As a result of its conferences, the Committee reported that, in view of the magnitude of the problem involved and the lack of adequate information, it could not pass beyond the enunciation of principles to the recommendation of concrete measures.

The fourth plenary session of the Central Executive Committee of the Kuomintang accordingly referred back the matter to the Central Political Council.

The National Government thereupon requested the Minister of the Interior and the Minister of Finance, both of whose departments had begun to make studies of agrarian problems, to co-operate with the National Economic Council for the purpose of forming a commission of three members to make a comprehensive study of the agrarian situation, including all important relevant topics. It was understood that the work was not to be limited to investigation, but that recommendations for reform were to be made and that the work was to be concluded in six months. The National Economic Council, in addition to its studies in Kiangsu and Chekiang, is conducting at present a survey of certain localities in Shensi and Kansu and also making a study of rural credit. The advisory Committee of the National Economic Council will appoint a technical secretariat which will be responsible for the evidence to be submitted to the Committee of Three. In the collection and elaboration of the evidence, the League experts will also participate.

One of the first studies which will be conducted is of the practicability of land registration. Without some sort of land survey, the reform of the land tax and its conversion into a productive and equitable source of revenue, with all the social and economic benefit which would result from such a measure, can hardly be effected. But the cost of making a survey by the usual methods is prohibitive; a moderate estimate puts it at \$150 million for the whole of China. The suggestion has lately been made, however, that, by using aircraft for the survey, the cost might be drastically reduced. The expensive part of land registration is not the discovery of the owners of the various plots of land, but the measuring and delimitation of the holdings. It is claimed that, in some regions, a good aerial map would give at a glance all the information which is required. The Advisory Committee is therefore arranging for a further study of this suggestion, and of others upon the same lines.

Chapter III.

COTTON.

The Commission for the Rationalisation of the Cotton Industry was established on October 7th, 1933, and consists of about twenty members, representing the interests of cotton-growers, merchants and manufacturers under the chairmanship of M. K. P. Chen, Director-General of the Shanghai Commercial and Savings Bank. Current business is directed by a standing committee of five.

If China becomes an industrial nation, cotton weaving and spinning will probably be the most important of its industries. At present this industry is more heavily capitalised and employs more labour than any other of the growing industries. Moreover, China, unlike Japan and the United Kingdom, can not only support a cotton industry, but can also produce the raw material. It possesses in eleven of its provinces all the natural characteristics suitable for cotton growing. Shansi, Honan, Hopei, Shantung and Kiangsu are the best areas; Shensi, if irrigated, would also be admirably situated.

The supply of cotton, however, is inadequate for the spindles of the Chinese cotton industry. In 1932, the import of raw cotton totalled \$233 million, amounting to more than a quarter of China's visible adverse balance of trade. The industry needs at least 12 million piculs per annum, and with the increase in demand for cotton goods which must be anticipated with an increase in the prosperity of the farmer, this need will continually become greater. The reason for this unsatisfactory state of affairs is partly the low productivity per acre of Chinese cotton-growing districts, and partly the poor quality of the cotton; both being due to the use of poor or degenerated seeds. As a result of a preliminary survey by the Cotton Commission, it has been established that the average production per mow with seeds most commonly used is one-fifth of a picul. On the other hand, in the same soil, the output from improved types of seeds is four-fifths of a picul. The poor quality of the cotton grown from Chinese seed is an even more serious disadvantage than its small output. Manufacturers making anything but the coarsest of cloth are obliged to buy foreign cotton.

If Chinese cotton-growers used a better seed, China would be exempt from the necessity of importing new cotton and therefore free to import machinery, or some commodity which it cannot at the moment itself produce. It is clear, therefore, that a Commission, charged with the improvement of the cotton industry in all its aspects, has, as its first task, the improvement of the quality of the seed. The Commission intends to effect this partly by an extension of the co-operative movement among cotton-growers. Co-operative societies are the most convenient media for the distribution of improved seeds to the farmers. They also secure for the cotton-grower attractive prices. Farmers will not grow cotton unless they can make a profit at least equal to that which they get for growing wheat or rice, and, in the market as at present organised, there is so long a chain of middlemen between the producer and the ultimate

purchaser that the price to the grower hardly covers cost of production. A beginning of a co-operative movement for the marketing of raw cotton has been made in the last two or three years by one of the Shanghai banks, and there are at present about 10,000 members. The Commission hopes to extend this organisation very considerably.

These co-operatives, besides assuring the cotton-grower of a higher price and thus stimulating production, will be used for improving the quality of the crop. One of the chief disadvantages of Chinese cotton is the unreliability of its quality. Chinese cotton is actually several dollars cheaper than American, but manufacturers are unwilling to purchase, because the cotton is frequently found to be adulterated, or mixed with sand or with wheat seed. The Cotton Commission proposes to attach to each co-operative society an officer who will grade and standardise the produce; cotton which does not come up to a certain standard will be refused, and this is expected to have a controlling effect.

Besides establishing this co-operative organisation, the Commission intends to establish at Nanking a central bureau for the improvement of cotton, and, in co-operation with the provincial bureaux of reconstruction, will set up similar institutions in five of the provinces. The business of these establishments will be to experiment with and propagate improved seeds, to collect statistics concerning the cotton crop, to study fertilisers and to conduct propaganda among cotton-growers with a view to giving them the technical knowledge which they lack.

Its ultimate aim is the systematic control of the whole industry; the organisation of the financial structure of individual enterprises, the replacement of obsolete machinery and the rationalisation of trading methods. Plans have been worked out for the erection of a special financial organisation for this purpose, but the contemplated arrangements are still being actively studied. In the meanwhile, the Commission would subsidise and guide specialised training in three of the largest engineering colleges. Discussions are also taking place with the *Academia Sinica* in regard to facilities at the Academy's institutes for continuous industrial research into a series of specific problems. The Committee set up by the National Economic Council to advise on technical studies is being apprised of the results of these conversations, which are likely to materialise during the year.

The Commission will thus, during its first and experimental year, confine itself chiefly to measures for improving the raw material.

Chapter IV.

SILK.

1. The falling-off in the export of silk is one of the most striking features of the Chinese economic situation. Although this decline is partly attributable to the world depression, it is probably also due to more particular causes, as is demonstrated by the fact that the export has declined more than proportionately to the total foreign trade. Between 1928 and 1933, the export of silk fell from \$282 million to \$93 million. In 1928, this represented nearly 20 per cent of China's total exports; in 1933, it was only 15 per cent. The Chinese export of silk fell between 1928 and 1933 by 67 per cent, and, since the world purchase (excluding purchases of artificial silk) did not fall off in the same degree, it is clear that China lost a part of its silk trade to other countries. The position is the more serious, inasmuch as China had natural advantages for sericulture greater than those of any other country. An extended cultivation of silk would, moreover, provide the farming population of China with a surplus of production over consumption; the lack of this surplus at present renders China a poor customer for industrial commodities.

2. M. Benito Mari, former Chairman of the Italian Association of Sericulture, who, at the request of the Chinese Government, was sent to China at the nomination of the Economic Committee of the League at the end of 1932, has been conducting an investigation into the state of the silk industry. His enquiries extended over the provinces of Chekiang, Kiangsu, Kwangtung (in which province Canton is situated), Shantung and Szechuan, which lies far up the Yangtze valley in the remote west. M. Mari has made a number of reports, and last autumn embodied these in a composite one (see page 4).

3. M. Mari attributes the decline of trade, apart from causes due to the world economic position, to a deterioration in the quality of silk produced, which has led old-established buyers to discontinue or diminish their purchases and transfer their custom elsewhere. Faulty methods of mulberry-tree cultivation; the degeneration, due to improper selection, of the silkworm eggs; primitive and haphazard rearing of silkworms, and their improper feeding; the spoiling of cocoons in the drying process; indifferent management of the filatures and the lack of favourable financial backing; all have played their part in bringing about the present decay. One cause is especially potent. In the cocoon market, there is no attempt to grade the cocoons, good and bad alike being purchased by the filatures, and, in consequence, Chinese silk is of very variable quality. The deleterious effect of this upon the foreign market can scarcely be overstated.

4. M. Mari has made suggestions for the improvement of the industry in all its branches. The gist is given in the following paragraph, taken from page 9 of the report which he made last autumn :

“ The reconstruction of China's sericultural industry is a task of great magnitude which can only be accomplished by degrees. Nothing can be done, however, without compulsory Government regulation of certain phases of silk production . . . The Chinese Government should establish a State monopoly for the control of everything pertaining to the cultivation of mulberry trees, to the preparation of silkworm eggs, to the rearing of silkworm and cocoons and to the price and sale of cocoons. On the other hand, silk reeling and the marketing of raw silk should be left to private initiative, at any rate until better understanding and agreement have been reached among reelers, which would make it possible to organise a single selling institution. Nevertheless, silk filatures should be assisted with technical advice and with instructions, which should, in some cases, be obligatory, and they should be given a commercial information service, while their working conditions and output should be subject to Government control.”

5. The improvement of Chinese sericulture has for some years occupied the attention of various public bodies. In 1919, the foreign chambers of commerce at Shanghai, in collaboration with Chinese interests and since 1927 with the National Government, have maintained an institution called the International Committee for the Improvement of Sericulture. This Committee has functioned principally in Chekiang and Kiangsu. The guiding principle governing its activity has been to improve the quality of Chinese silk, to reduce its price, and to make its quality uniform.

In this connection, the Committee has established three stations in Kiangsu for the breeding of improved and uniform eggs. To disseminate these eggs, which are sold at cost price, it has established in Kiangsu and Chekiang a number of demonstration stations, each having a staff trained by the Committee, which maintains at Chinkiang a school for this purpose. Stations are also prepared to give constant advice and aid to the farmer in the rearing of his silkworms ; to disinfect free of charge his house and implements ; and to assist him in the combating of disease and the pests which attack his mulberry trees. Since the most efficacious way to bring pressure on the farmer to improve his product is through the prices paid, the demonstrators offer their services to the purchaser of the cocoons in grading and valuing. This function has in some cases been taken over by co-operative societies, organised by the demonstration stations.

6. When the situation of the silk industry became critical, the Government of Chekiang, in which province a substantial part of the farmer's income was derived from sericulture, decided to intervene. In collaboration with the International Committee for the Improvement of Sericulture, a new joint commission was formed, called the Kiangsu and Chekiang Sericulture Uniformity Commission. This Commission, which received its supply of eggs and its staff from the International Committee, took over and extended the work formerly done by the Committee in Chekiang.

A few details of the work of some of the stations established by the Commission may be of interest.

In the Siaoshan district of Chekiang (declared, according to the terms above, a model area), nearly 120,000 sheets of eggs were distributed. Ten demonstration stations were established with forty-three demonstrators and the total expenditure

was \$11,600. Several stations were set up for the collection of cocoons. In this district, more than 25,000 rearers sought the help of the stations; over 17,000 houses were specially disinfected for sericulture by demonstrators; twenty-two co-operative societies were formed.

In the Wuchow district of Chekiang, thirteen stations were erected, and twenty demonstrators employed. In the course of their operation, they disinfected more than 2,000 houses and formed twenty co-operative societies.

In the Haiyen district, six stations were established with a staff of eight demonstrators and the silkworm rearing of nearly 1,000 farmers was supervised.

7. One of the most disorganised processes of the industry is the collection of the cocoons for the filatures. M. Mari makes the following comments on this in his report (page 6):

“Strictly speaking, there is no organised cocoon market, as in Europe, on which the farmer can sell his products at competitive prices. The silk filatures decide in advance at what average price they will purchase cocoons from the farmers, and send out collectors who buy up the crops at a uniform price. The buying agents' technical knowledge is often negligible; they are either unable or unwilling to distinguish good products from bad, while the farmer, aware that the price which he can obtain is not determined by the quality of his cocoons, does not take enough care of his rearings and sometimes keeps back the best part of his crop and hands over the worst to the collectors. The existence of this pernicious system very largely explains the farmer's indifference to improved methods of production.”

In August of last year, the Chekiang Government resolved to constitute itself, through the medium of the Sericulture Improvement Commission attached to its Bureau of Reconstruction, the intermediary between the farmer and the filatures. All cocoon markets were asked to notify their requirements one month before the collection of the autumn crop. Their demands were then to be apportioned to the supply available. As the prices of cocoons had fallen sensationally in the course of the year, it is not possible to calculate exactly the difference between what the farmer received under this system and what he would have received under a free competitive system. But to a small extent he did undoubtedly benefit.

8. During the last winter, the Central Government decided to include the rehabilitation of sericulture as a part of the reconstruction programme. On January 1st, 1934, the National Economic Council, under its power to create autonomous commissions for the control of industries, established such a Commission for the silk industry. Like the Cotton Control Commission, this consists of members representing the different interests concerned.

The Silk Commission has received an allotment of \$750,000 from the budget of the National Economic Council. Since one of the chief causes of the decline of the silk trade is the poor quality of the egg, the Commission proposes to set up two stations, at a cost of \$200,000, one in Chekiang and the other in Kiangsu (two of the most favourable areas for sericulture), which will propagate improved varieties. It was proposed to extend this activity to Kwangtung, but funds do not allow. Eggs will, however, be distributed in Szechuan. These two stations will be in addition to the breeding stations of the other two commissions. The remainder of the allocation

will be used for setting up demonstration stations (and, in time, model areas) upon the lines followed by the International Committee ; and in organising and buying machinery for silk factories created by the amalgamation of existing small units. Plans are now in process of elaboration.

9. Another important action by the State in the regulation of the silk industry is the establishment of bureaux at the ports for the testing and grading of all silk to be exported. These bureaux exist at six principal ports. It is expected that this measure should have important effects in two directions. In the first place, it should cause foreign purchasers to have greater confidence in Chinese silk ; and, in the second, it should stimulate the producer and lead him to pay closer attention to quality ; and he will thus become more willing to seek the aid of organisations established for his assistance.

10. Besides this action by the National Economic Council, there has been a development of some interest in Szechuan. There the silk reelers, under the pressure of financial difficulties, were induced by local bankers to organise with Government assistance a co-operative society called the China Silk Corporation. Only one filature in the province does not now belong to the Corporation. This co-operative, the first of its kind in the silk industry, has not been in existence long enough for its value to be estimated ; it is possible, however, that by such combines the necessary economics will be introduced into the financial arrangements, the necessary efficiency into industrial management, and a greater strength into the marketing position, to enable China to recapture a part of its export trade.

Chapter V.

WATER CONSERVANCY.

1. Floods are perhaps the worst of the natural calamities which periodically afflict China. The country to the south of the Yangtze is mountainous, and the rivers in that territory give little trouble. But, in North China, the rivers, after taking their rise in the loess highlands of the north-west, flow across an immense plain before reaching the sea. In the course of centuries, having washed down great quantities of silt, they have formed beds which are higher than the surrounding country and can therefore only be kept from overflowing by means of dykes. In Central China, though there is nothing like the same quantity of silt carried by the Yangtze, the conditions are not dissimilar. The bed of the Yangtze is not deep enough to accommodate the water flowing into it after a period of abnormally heavy rainfall. Its tendency at such a time is therefore to spread over the whole of the neighbouring plain.

2. In a country so situated, water conservancy work must necessarily be of interest to the Central Government, and, in the spring of 1931, the Chinese Government informed the Communications and Transit Section of the League that it intended to include certain hydraulic projects in a first programme of national development. Of these, the most important was a scheme for the improvement of the Hwai River. But the Government was anxious, before starting to carry out this scheme, to have the advice of engineers who had been engaged on work of a similar character elsewhere. It accordingly requested the Transit Organisation of the League to appoint a commission to come to China and review the situation. At the same time, the Government announced that, in the event of such a commission being despatched, it would seek its advice on certain proposals connected with the port of Shanghai and with the rivers of North China. Another of the projects was for a station for the technical training of civil engineers, and for the organisation of this the Government also requested the aid of the League.

3. One June 13th, 1931, the League's Advisory and Technical Committee for Communications and Transit accepted the invitation of the Chinese Government to collaborate in the work described.

4. A commission of three engineers was accordingly despatched to China. It consisted of Mr. Coode, a member of the London Institute of Civil Engineers; M. Perrier, Inspector-General of Roads and Bridges at Paris; and M. Sieveking, Director of the Hamburg Port Administration. The Commission arrived in China at the beginning of January 1932, and stayed about three months. The visit was under the auspices of the National Economic Council. The report of the Commission was addressed to the Communications and Transit Organisation of the League of Nations, which presented it in February 1933 to the National Economic Council.

5. The peculiarity of the Hwai River, which lies between the Yangtze and the Yellow River and is one of the largest rivers in China, is that it has no clearly-defined outlet to the sea. In consequence there is a grave danger of flood whenever rain falls heavily in the upper reaches of the river. The Government, in planning action, had hesitated between two plans, one to make a new outlet to the Yellow Sea, the other to conduct the waters of the Hwai into the Yangtze. The Commission recommended the second of these courses. On the strength of its report a loan was obtained from the British Boxer Indemnity Fund, and work, estimated to cost about \$14,000,000, has begun on the lines suggested by the Commission.

Certain of its proposals are also being carried out on the rivers of North China. At Shanghai, the Commission considered a plan by the municipality of Greater Shanghai for building a dock between the city and the junction of the Whangpoo and the Yangtze. In this case, it expressed the opinion that, on technical grounds, the building of such a dock would be a mistake.

6. Between the passing of the aforementioned resolution of the League Communications and Transit Committee in June 1931 and the arrival of the Commission of engineers in China in January 1932, there had occurred, in August and September 1931, the catastrophe of the Yangtze flood. The damage done is described as follows in the report of the Flood Relief Commission :

“ During the late summer months of 1931, 25,000,000 people, inhabiting an area of 70,000 square miles, were affected in various ways by the greatest flood in the history of China. Approximately 140,000 persons were drowned and a number which cannot be accurately ascertained, but which must be very large, lost their lives through other causes directly attributable to the flood. Forty per cent of the people in the affected regions were compelled to migrate for the greater part of winter. A crop worth \$900,000,000 was lost, and a total loss of \$2,000,000,000 was borne by a community whose average family earnings do not exceed \$300 a year.”

The situation which resulted was so urgent that the special body called the National Flood Relief Commission was called into being to deal with it (see chapter I, paragraph 1). Besides work devoted to the relief of immediate distress, the National Flood Relief Commission undertook to repair and rebuild certain dykes on the Yangtze and its tributaries, and, in the course of its activities, built dykes to the length of over 7,000 kilometres. It is estimated that at one time over one million persons were engaged in dyke-building. Wages for this work were paid mostly in kind, out of a loan of 450,000 tons of wheat from the United States. Taking the price of a ton of wheat to be \$74, wages represented a cost of \$20,000,000. Other costs were only \$2,000,000. In hydraulic matters, the attention of the National Economic Council was directed entirely to assisting the Flood Relief Commission.

7. When the National Flood Relief Commission ceased to exist in the summer of 1932, the National Economic Council was directed by the Government to take over its duties and the funds and material which the Commission still had in hand. The funds amounted to about \$1,600,000 (this sum being included in the total shown in paragraph 7 of Chapter I). In November 1932, the National Economic Council was also instructed to take over the control of conservancy work in the Province of Hupeh. Between November 1932 and the beginning of 1934, the National Economic Council has been in receipt of funds for this work, derived chiefly from Customs, to the average monthly amount of \$200,000.

8. To fulfil these duties, the National Economic Council formed a special Hydraulics Bureau, which was partly staffed by engineers taken over from the National Flood Relief Commission. The Bureau had at its disposal the services of M. F. J. M. Bourdrez, one of the representatives in China of the Transit Organisation. Four offices, organised on somewhat similar lines to the central bureau, were set up by the Bureau to take charge at the centres where the Flood Relief Commission had been making extensive operations. A committee was also formed of persons appointed by the Standing Committee of the National Economic Council for the purpose of exercising general supervision over the work of the Bureau.

9. The work of the Bureau during the eighteen months of its existence was partly to complete the work of the Flood Relief Commission, and partly to carry out the conservancy work in Hupeh Province. This work consisted almost entirely of the repairing and strengthening of earth dykes along the Yangtze and Hwai rivers and their tributaries. The total amount spent was \$1,407,000.

10. By December 1933, the programme drawn up when the National Economic Council took over from the Flood Relief Commission had been almost completely carried out and the funds available, except for the work in Hupeh, had been exhausted. All the work had been in the nature of an emergency programme. Flood prevention and the improvement of rivers is normally in the hands of three great conservancy commissions (situated at Tientsin, Shanghai and Canton) which derive their funds chiefly from shipping taxes and river dues, of river commissions supported by grants from the National Treasury and appointed by the National Government, and of provincial river bureaux. With the exception of the Whangpoo Conservancy Commission at Shanghai, which, in 1931, had an income of over \$4,000,000, their incomes are comparatively small. None of them, either from a financial or administrative point of view, was competent to take over the work of the Flood Relief Commission, and this in consequence devolved upon the National Economic Council, the only available national body.

11. At the beginning of 1934, in drawing up the project for the year, the Standing Committee decided that it was time to determine what permanent part the National Economic Council should play in conservancy undertakings. But, before making its decision, it resolved to seek through the League the advice of a hydraulic engineer of international standing.

It was understood that, as a result of this consultation, the projects would be selected upon which it would be advisable to concentrate in the immediate future. Arrangements have been made for a technical officer, commissioned by the National Economic Council, and M. Bourdrez to go to Europe this summer, taking with them detailed descriptions of the various projects, relevant maps and documents and records of observation work carried out both as a part of their routine by the hydrological research stations and also with special regard to the detailed schemes for improvement and river control.

12. As these consultations will take time, the studies in China cannot begin before next autumn. In the meanwhile, the National Economic Council has decided to undertake irrigation work in connection with the assistance to be given to the provinces of the north-west.

13. These provinces are liable to suffer from devastating drought. It is thought, however, that this drought can be averted by irrigation. There are three major

irrigation projects for the north-western provinces, two of which have already been partially carried out. The National Economic Council proposes to make subsidies totalling more than \$1,000,000 for all these projects, and put its skilled engineers at the disposal of the provincial Government. A survey party, accompanied by M. Bourdrez, is at present in the district engaged on a study of the work to be undertaken in the course of the year.

14. The observation of facts relating to rivers and the collection of hydrological data, essential for the planning of co-ordinated policy, is considered to be on an unsatisfactory basis. Data are collected by the River Commission, the provincial river bureaux and reconstruction bureaux, and by special institutions such as the Customs Marine Department, the Academia Sinica, the observatory of Zicawei, the Hydrographical Department of the Ministry of the Navy, the Survey Bureau of the Ministry of War, and the hydraulic faculties of universities. As many of these institutions use different instruments and methods of calculation, their results are of little value. Nevertheless, for hydraulic work, information regarding climate, meteorology, watercourses, nature of soils, etc., is essential. The proposed irrigation work of the north-west is, for example, seriously hampered because no data have been collected in the past showing the need for water of different crops in the soil of that district. The technical secretariat of the National Economic Council is accordingly working out a plan for the co-ordination and supervision of research work, with a view to rendering it useful for the guidance of practical policy.

15. The technical secretariat, in drawing up its project for work, has also felt the need for a laboratory for the conducting of tests. It is understood that a portion of the Dutch Boxer Indemnity Fund will be available for the building of such a laboratory, which, it is estimated, will cost less than \$400,000. The laboratory will conduct the following studies :

- (a) Relations between current and velocities and silt deposits ;
- (b) Character of the different sediments ;
- (c) Most suitable cross-sections of dykes—seepage through dykes ;
- (d) The most suitable types of spur dykes or other training works in rivers, with special attention to the so-called permeable construction in rivers with high silt percentage ;
- (e) Protection of dyke surfaces ;
- (f) The roughness coefficient in the most important Chinese rivers.

16. In the original plan for collaboration between the Chinese Government and the Transit Organisation of the League, mention was made of the establishment of a station for the field training of engineers, but this plan has not materialised.

Chapter VI.

ROADS.

1. During the last five years, road construction by provincial Governments has considerably increased in pace. It is part of the general movement for modernisation which has swept over the whole country since 1925. It was realised that a system of communications was indispensable for ensuring security, administrative order and political unity. Within each province, it would render the business of local government easier, bring greater cohesion and help economic development by providing facilities for the passage of persons and goods. Modern means of communication are indeed still very few. There are not more than 13,000 kilometres of railways in China, as compared with 77,000 kilometres in the U.S.S.R., 32,000 kilometres in British India, and 400,000 kilometres in the United States of America. This absence of railways is not compensated by a system of roads. Although there was once a fairly good system of courier highways, these were allowed, during the Manchu dynasty, to fall into disrepair.¹ Roads in rural China represent a network of small, picturesquely winding and narrow footpaths, and, since most transport is by donkey or wheelbarrow, or on the human back, these paths had been sufficient during centuries of Chinese history.

2. When road-building began, construction was spontaneous and was carried out either by provincial Governments or by military commanders, and, as the programmes were not co-ordinated, they were in many cases wasteful. No Ministry undertook responsibility for roads, and thus the National Economic Council at its inception was led to organise a Roads Bureau. Its policy has been to co-operate with the provincial Governments and with private interests in order to stimulate, control and guide their activities by the grant of loans for roads the construction of which was considered desirable. The choice between the various systems of highways lies in the hands of the National Government, and is dictated by considerations of general policy and the interests of national defence. Consequently, a plan was drawn up in 1932 for a system of highways, first for the three provinces of Kiangsu, Chekiang and Anhwei, and later in the year for these together with the adjacent provinces of Hupeh, Honan, Hunan and Kiangsi. The Roads Bureau prescribes the location, quality and kind of roads to be built, and, in selected cases, grants loans at low rates of interest to cover about 32 per cent—in some cases more—of the building costs, placing at the disposal of the provincial authorities its advice and expert engineers. This policy resulted in a considerable acceleration in the process of construction, the roads built during the last two years with the help of the National Economic Council amounting to about 4,000 kilometres.

In many cases, it was sufficient to construct short links between already existing systems in order to open up new territories, and, as a result of their comparatively

¹ The National Good Roads Association estimates that, in 1927, there were, in the whole of China, a little less than 30,000 kilometres of roadway. This is probably a considerable overestimate, as it would not have been possible to drive a car along many of the roads.

modest construction cost, a connected system of more than 12,000 kilometres has been brought into existence. The following table shows the length of road *now* open in each of these provinces :

	Kilometres
Kiangsu	2,416
Chekiang	1,602
Anhwei	2,092
Kiangsi	2,224
Hupei	1,833
Hunan	1,398
Honan	2,111
	13,676

The average cost has been only a little over \$6,000 per kilometre. The total amount of loans extended by the National Economic Council to provinces for rural reconstruction from May 1931 till April 1934 has been \$3,982,000.

3. It may not be out of place to repeat that the provinces did not need any persuasion to follow an active policy of road-building, of which the National Economic Council has no monopoly. The following table shows the length of existing roads open to traffic (in kilometres) in each of the provinces in 1933 (figures of the Bureau of Roads, National Economic Council) :

Kiangsu	2,416	Kweichow	1,165	Heilunghiang	1,970 ¹
Chekiang	1,602	Yunnan	1,344 ¹	Jehol	2,330
Anhwei	2,092	Hopei	1,951	Suiyuan	478
Kiangsi	2,224	Shantung	6,885	Ningshia	2,550 ¹
Hupei	1,833	Shansi	2,025	Chahar	3,757
Hunan	1,398	Honan	2,111	Outer Mongolia	3,176
Szechuan	3,980 ¹	Shensi	1,169	Sinkiang	1,325 ¹
Sikang	575 ¹	Kansu	637	Tibet	—
Fukien	2,449	Chinghai	1,173	Total	71,756
Kwangtung	10,700 ²	Liaoning	2,420 ¹		
Kwangsi	3,896	Kirin	2,125 ¹		

Even in the seven provinces comprised in the scheme mentioned above, the local Governments have completed many roads without the assistance, and sometimes even against the advice, of the National Economic Council. This unassisted road-building is sometimes in the ratio of 4 : 1, as was the case in the Province of Chekiang during the last two years. Outside the seven provinces, Shantung, Kwangtung and Kwangsi have been particularly active, having constructed between them over 9,200 kilometres of roadway.³ In many cases, what is returned officially as a road would not come up to the standards drawn up by the Roads Bureau of the National Economic Council, and is likely to be little better than a cart track, rapidly deteriorating under even light traffic and unusable in time of heavy rainfall.

¹ From *Chinese Economic Journal* (August and September 1933).

² From *Kwangtung Reconstruction Monthly Special Issue on Highways*.

³ Roads built in five provinces, 1931-33 :

	Kilometres		Kilometres
Kwangtung	4,183	Fukien	1,062
Shantung	3,693	Hopei	646
Kwangsi	1,326		

The data from which this table is compiled are not wholly reliable.

4. The Roads Bureau has three departments: (a) for transport, (b) for planning and investigation, (c) for engineering. It has established branch stations at the principal construction sites. It has drawn up regulations for traffic control, given short courses for highway engineering, has begun the establishment of a museum and a reference library, published a Chinese dictionary of road terms, and commenced the registration of highway engineers. It has several sectors of an experimental road near Nanking, in order to determine the most appropriate form of road construction.

5. The National Economic Council was not directed by the National Government to consider a general policy of communications for the country. In determining, however, the guiding principles for the policy of its Road Bureau, it starts from the assumption that railways, and in a lesser degree waterways, represent at present, and will of necessity represent in the near future, the main lines of communication. Roads are therefore considered as feeders of these main lines, and, in planning new construction, the advice is given that, as a general rule, they should be built to supplement and connect, and not to duplicate, the existing communications. When conditions permit, the starting of new railway construction on a more considerable scale than is possible at the moment, the present schemes will have to be adjusted accordingly. With the renewal of work on the Canton-Hankow Railway, the extension of the Lunghai Railway to the remote north-west, and the connecting up of Hunan and Chekiang by a railway along the lower reaches of the Yangtze, this period of railway construction appears to be close at hand.

6. Furthermore, in planning a system of communications for a country, it is necessary to investigate what requires transportation. This depends on the geographical and economic situation. China is a country which has a preponderantly agricultural, and a very much smaller though steadily growing industrial, area. In the districts of Tientsin (population 1,319,000), Peiping (population 1,492,000), Shanghai (population 3,259,000), Nanking (population 672,000), Hankow (population 746,000), and Canton with its hinterland (population over one million),¹ the development of motor-bus traffic run at a profit, and the building of garages, petrol-pumps and repair-stations, has been quite considerable during the last few years.

The rest of the country is predominantly agricultural, the density of population varying to a very considerable degree from one area to another. The column 2 of the following table shows the population per square mile of the more important areas:

Province		Population in 1926) (Post Office estimate) (000's)	Population per square mile
Yangtze Valley	Chekiang	24,140	657
	Kiangsu	34,624	896
	Anhwei	20,199	368
	Kiangsi	27,564	395
	Hupei	28,617	400
	Honan	35,290	522
	Hunan	40,529	486
	Shantung	34,376	614
	Hopei	38,906	335

¹ Estimates given in the *Statistical Monthly*, the publication of the Directorate of Statistics, National Government of China.

	Province	Population in 1926 (Post Office estimate) (000's)	Population per square mile
The north-west	Kansu	17,223	59
	Shensi	7,423	228
	Shansi	12,153	149
The south	Fukien	14,330	309
	Kwangtung	36,776	369
	Kwangsi	12,258	159
	Szechuan	52,064	238

Such parts of the country as the Hsien of Kiangning, Kiangsu and the plain of Chengtu in Szechuan resemble an extensive and thickly-populated urban area, rather than what may be assumed to be ordinary countryside. In these regions, there is either at present or likely to develop a considerable demand for, and an increase of, rapid means of transportation, probably by motor vehicles.

In less congested areas, transport is needed predominantly for the conveyance of goods, and its type will be determined by the kind of commodity produced, taking into consideration the need or otherwise for speed, the weight and the bulk, while the principal factor will be cheapness. To the farmers in this country, accustomed as they are to slowness of means of transport, a speed of five miles per hour is satisfactory, and they do not as a rule feel the need of increasing it five times—*i.e.*, to the average speed of motor transport. Until present times, such a differentiated system of communications suited in different regions to the different types of country has not been worked out in accordance with any preconceived plan or plans, but has rather followed local customs. Thus, except in the north, where horses and camels are used to a varying extent for draught purposes, the chief motive power in transport has been human labour and donkey and muleback transportation.

7. A table prepared by the Bureau of Roads from statistics gathered in Kiangsu and other provinces of the comparative cost of transport is very illuminating. The types of load are classed according to their degree of bulk and perishability.

Type of transportation	Freight rates (per ton-kilometre) \$
Railways	first-class cargo 0.170
	second-class cargo 0.110
	third-class cargo 0.093
	fourth-class cargo 0.068
	fifth-class cargo 0.045
	sixth-class cargo 0.035
Motor-trucks	first-class cargo 0.521
	second-class cargo 0.384
	third-class cargo 0.256
Donkeys, mules and horses	0.20 — 0.30
Camels	0.20 — 0.30
Carts (animal-drawn)	0.08 — 0.20
Wheelbarrows	0.18 — 0.20
Junks	0.02 — 0.05
Steamers and launches	0.02 — 0.12

The high cost of motor transport as compared in particular with railway transport calls for serious consideration. The cost of maintaining roads in good condition is an important factor, as also is the considerably longer life of railway rolling-stock as compared with that of motors, particularly in a country where motor transport is in its infancy.

8. Furthermore, motor-cars are much beyond the means of by far the greater part of the population of the country, and it may perhaps be said that, in the provinces provided with motor roads, private cars are as rare as private railway carriages on European railways. Motor vehicles at present, with the exception of the industrial areas and the principal cities, are owned and operated by corporations, either public or private.

There are four kinds of such companies in existence.

The first operates in towns, and as a rule with considerable profit, some of the routes being given free of charge to private enterprises.¹

The second kind exists where a railway terminus does not reach an important city or provincial capital. Such a case is, for instance, that of the 174 kilometres between Tungwan, the terminal point of the Lunghai Railway, and Sianfu, over which there are more than 200 different enterprises in operation, the majority owning only one vehicle.

The third kind comprises regular services for passenger traffic over long distances, not linked by railway, separating important centres of population, or intended to link up with far-distant railway systems, either within the country or outside its borders. The public motor services are organised in certain provinces like Hunan, with its 900-odd miles of motor roads, on the model of railways, with regular timetables, stations at fixed intervals and road supervision.

Table A shows a list of services operated in all the roads in the seven provinces (See page 47).

The fourth kind comprises the services connecting industrial centres around some of the ports in the north with vast areas separated by sparsely populated regions or districts having these ports as their natural outlet for their produce. In the case of one such projected highway, it is calculated that the time may be reduced from the two to six months required by camel caravans to three to four weeks for regular motor-truck services.

It may be assumed that the motor vehicles imported into China are, except for military purposes, used either in the industrial areas or for the motor-bus services

¹ Details are available of the municipal bus services of Greater Shanghai and Nanking.

(1) There are two bus services in Nanking. The first, called the Kiangnan Company, has a capital of \$200,000 and is privately owned. It began to operate in the autumn of 1933, having received a licence for ten years. Under the terms of this licence, it pays 3 per cent of its total monthly receipts into the Treasury. The company operates two services, and possesses thirty buses, which are of moderate quality, being chiefly second-hand trucks with coach-work locally constructed. The Company has not been in existence long enough for its financial prospects to become clear. The second company has a capital of \$100,000, and operates sixteen buses, all of which are of a very inferior type. Besides paying a duty of \$30 a month on each of the buses, the company has to pay 30 per cent of its total annual profit to the municipality. Since 1931, however, the company has been run at a loss.

(2) There are five private bus companies in Greater Shanghai, four of which operate long-distance lines extending outside the city. All these companies report a profit. The tariff on the long-distance lines varies according to distance between 32 and 39 coppers. In 1932, the China Autobus Company of Chapei, which has twenty-five buses and operates exclusively inside the city, carried 3,100,000 passengers.

described in Table A. Since no motor vehicles are manufactured in China, the Customs returns showing the imports of vehicles give a clear indication of the growth of traffic. ¹

The Customs did not, before 1929, differentiate between private motor-cars and freight trucks and buses.

9. The fuel required for motor vehicles presents another problem of capital importance. Home-produced oil is not as yet commercially available. The price of imported petrol at seaports is 70 cents, which is 60 cents above cost price on the Pacific coast of the United States of America. The total importation during the five years 1928 to 1933 has been 143,519,000 American gallons. In the interior of the country, such figures as are available show that the cost is rising to \$1.20 at Tungkwan and \$6.00 at Liangchow in the north-west, which, together with the cost of lubricating-oil, makes the running cost of a car particularly heavy in relation to the economic standards of the population.

On the other hand, plentiful supplies of coal are available in many provinces, both at the sea-coast and in the interior of the country. Accordingly, the extraction of fluid and gaseous fuel from coal has attracted attention, and the commercial possibilities as applied to the various types of home-extracted coal are now being tested. A sum of \$100,000 has been earmarked in the budget of the National Economic Council for 1934 for studies of fuel to be undertaken by the National Geological Survey.

Year	Number of cars		Motor-cycles
	Commercial,	Private	
1926	4,499		655
1927	3,328		419
1928	4,065		570
1929	4,142	4,639	707
1930	1,933	2,347	458
1931	1,435	2,315	552
1932	1,227	2,882	282

Principal ports of entry:

	1927	1928	1929	1930	1931	1932
Dairen	959	1,096	1,878	527	10	187
Tientsin	657	299	976	514	179	204
Kiaochao	248	168	333	179	116	98
Hankow	—	88	438	144	142	143
Shanghai	1,104	1,661	3,777	1,866	2,097	2,523
Amoy	52	23	289	135	153	132
Canton	155	116	134	265	274	310
Kowloon	56	91	25	154	222	302

Principal countries of origin:

	1927	1928	1929	1930	1931	1932
United States of America	1,105	1,600	3,527	1,332	1,541	2,811
Canada	223	265	161	132	62	21
United Kingdom	249	225	392	233	229	886
Japan *	679	1,140	3,582	1,795	979	80
France	191	180	225	203	172	108
Hong-Kong	484	672	864	650	760	79

* These are presumably re-exports from assembly plants established in Japan.

These figures are supplied by the Roads Bureau of the National Economic Council.

In connection with the above table, it is of interest to note that, since 1930, the tariff on commercial vehicles was put at 15 per cent and on private cars at 30 per cent.

Table A. — SHOWING THE PRESENT TRAFFIC CONDITIONS OF CENTRAL-AID ROADS
IN THE SEVEN PROVINCES.

Bureau of Public Roads, the National Economic Council of China.

Province	Route	Section	Autobus à voyageurs Passenger motor-buses			Camions à marchandises Freight motor-buses		Recettes mensuelles Av. monthly income		Exploitée par le Gouvernement ou par une Compagnie privée Operated by Government or private company	Observations Remarks
			Nombre d'au- tobus Number of buses	Nombre de courses par jour Frequency of operation (day)	Tarif voyageurs Charges, passenger	Nombre de courses par jour Frequency of operation (day)	Tarif Tonnes- Km. Charges ton-km.	Voya- geurs Passen- gers	Marchan- disés Freight		
Kiangsu	Nanking-Fukien	Nanking-Chekian	30	—	\$0.035	—	—	—	—	Co.	—
	Shanghai-Kwangsi	Shanghai-Minhong	10	—	—	—	—	—	—	Co.	—
		Minhong-Chekian	9	22	0.023	—	—	—	—	Gouv. Govt.	—
	Chinkiang-Shuyang	Chinkiang-Yangchow	25	12	0.042	—	—	\$12,000	—	Co.	—
	Soochow-Kiangyin	Wusih-Kiangyin	14	18	0.025	—	—	11,000	—	Co.	—
	Nantung-Kanyu	Sinanchen-Panpu	8	12	0.048	—	\$0.17	—	—	Co.	—
	Shanghai-Liuho	—	34	10	0.035 0.035	—	—	20,000	—	Co.	Ligne non rattachée aux routes construites avec l'aide des autorités centrales This line does not belong to the central-aid roads
											—
	Kiating-Lotien	—	—	—	—	—	—	—	—	Co.	—
	Chinking-Kuyung	—	3	8	0.030	—	—	4,000	—	Gouv. Govt.	Ligne non rattachée aux routes construites avec l'aide des autorités centrales This line does not belong to the central-aid roads
Total			133	—	—	—	—	47,000	—	—	—
Chekiang	Hangchow-Changhing	—	18	19	0.026	—	—	22,071	—	Gouv. Govt.	—
	Nanking-Fukien	Konzenchia-Shanlanmiao	16	45	0.034	—	—	16,306	—	Gouv. Govt.	—
		Siaoshan-Shaohing	40	28	0.025	—	—	47,320	—	Co.	—
		Shaohing-Tsaono-Chenghsien	21	—	0.030	—	—	—	—	Co.	Construit par une Comp. d'autobus Constructed by bus co.
	Shanghai-Kwangsi	Hangchow-Pinghu	15	11	0.026	—	—	6,612	—	Gouv. Govt.	—
		Chuhsien-Lanchi	10	—	0.030	—	—	—	—	Co.	—
	Hangchow-Hweichow	Hangchow-Yuhang	12	10	0.034	—	—	—	—	Gouv. Govt.	Précédemment exploitée par une Comp. d'autobus Formerly operated by bus co.
		Yuhang-Linan	12	10	0.034	—	—	—	—	Co.	—
		Linan-Changhwa	5	6	0.028	—	—	3,239	—	Gouv. Govt.	—
	Shuhsien-Changshan	—	5	—	0.030	—	—	—	—	Co.	—
	Ningpo-Fenghwa	—	18	40	0.025	—	—	21,256	—	Co.	Ligne non rattachée aux routes construites avec l'aide des autorités centrales This line does not belong to the central-aid roads
Total			172	—	—	—	—	116,804	—	—	—

*Table A. — SHOWING THE PRESENT TRAFFIC CONDITIONS OF CENTRAL-AID ROADS
IN THE SEVEN PROVINCES (continued).*

Province	Route	Section	Autobus à voyageurs Passenger motor-buses			Camions à marchandises Freight motor-buses		Recettes mensuelles Av. monthly income		Exploitée par le Gouvernement ou par une Compagnie privée Operated by Government or private company	Observations Remarks
			Nombre d'au- tobus Number of buses	Nombre de courses par jour Frequency of operation (day)	Tarif voyageurs Charges, passenger	Nombre de courses par jour Frequency of operation (day)	Tarif Tonnes- Km. Charges ton-km.	Voya- geurs Passen- gers	Marchan- dises Freight		
Anhui	Nanking-Szechuen	Hofei-Kaohofow	—	6	0.040	—	—	—	—	Gouv. Govt.	—
		Kaohofow-Tsienshan	13	2	0.040	3	0.25 to 0.56	5,500	\$300	Gouv. Govt.	—
	Shangchiu-Kimen	Kaohofow-Anking	—	6	0.040	—	—	—	—	Gouv. Govt.	—
	Nanking-Shensi	Chaohsien-Hofei	9	4	0.040	3	do	4,100	50	Gouv. Govt.	—
	Tienfow-Suining	Liangyuan-Tienfow		8	0.040					Gouv. Govt.	—
	Total	—	22	—	—	—	—	9,600	—	—	—
Kiangsi	Kaifeng-Kwangtung	Nanchang-Chushanchiao	23	Service direct 8 Through 36 Service local	0.036	—	—	1,600	—	Gouv. Govt.	—
		Chushan-Chiao-Kian	3	Service direct 14 Through	0.036	—	do	1,500	—	Gouv. Govt.	—
	Nanking-Kweichow	Huangking-fow-Nanchang	6	Service direct 8 Through	0.036	—	do	6,500	—	Gouv. Govt.	—
		Nanchang-Shangkao	12	Service direct 16 Through 8 Service local	0.036	—	do	13,000	—	Gouv. Govt.	—
	Shanghai-Kiangsi	Linchwan-Shantuentu	1	Service direct 8 Through	0.036	—	do	—	—	Gouv. Govt.	—
		Yungfeng-Patu	1	Service direct 6 Through	0.036	—	do	—	—	Gouv. Govt.	—
		Kian-Anfu	3	Service direct 6 Through	0.036	—	do	2,000	—	Gouv. Govt.	—
	Nanchang-Nanfeng	Nanchang-Linchwan	26	Service direct 30 Through 8 Service local	0.036	—	do	18,000	—	Gouv. Govt.	—
		Linchwan-Nanfeng	14	Service direct 12 Through 8 Service local	0.036	—	do	10,000	—	Gouv. Govt.	—
	Total	—	89	—	—	—	—	52,600	—	—	—
Hupeh	Nanking-Szechuen	Hankow-Shayang	10	Service direct 2 Through	0.034	2	0.45 to 0.20	6,600	2,100	Gouv. Govt.	—
	Loyang-Shiuchow	Siangyang-Shasi	8	Service direct 2 Through	0.040	2	0.56 to 0.32	7,000	700	Gouv. Govt.	—
	Hwayuan-Francheng	Ensemble de la ligne Whole line	25	Indéterminée Not fixed	0.040	15	0.56 to 0.32	20,000	20,000	Gouv. Govt.	—
	Hankow-Machang	Ensemble de la ligne Whole line	8	Service direct 2 Through	0.034	3	0.45 to 0.20	6,000	3,000	Gouv. Govt.	—
	Total	—	51	—	—	—	—	39,600	—	—	—

*Table A. — SHOWING THE PRESENT TRAFFIC CONDITIONS OF CENTRAL-AID ROADS
IN THE SEVEN PROVINCES (continued).*

Province	Route	Section	Autobus à voyageurs Passenger motor-buses			Camions à marchandises Freight motor-buses		Recettes mensuelles Av. monthly income		Exploitées par le Gouvernement ou par une Compagnie privée Operated by Government or private company	Observations Remarks
			Nombre d'au- tobus Number of buses	Nombre de courses par jour Frequency of operation (day)	Tarif voyageurs Charges, passenger	Nombre de courses par jour Frequency of operation (day)	Tarif Tonnes- Km. Charges ton-km.	Voya- geurs Passen- gers	Marchan- dises Freight		
Hunan	Nanking-Kweichow	Changsha-Yunganshih-Kaochiaio	11	Service direct 10 Through 8 Service local	0.0278	—	—	13,657	—	Gouv. Govt.	—
		Siangtan-Shaoyang	24	Service direct 14 Through 29 Service local	0.03654	27 23	0.2936	43,107	38,953	Gouv. Govt.	—
	Loyang-Shiuchow	Changsha-Changteh	19	Service direct 2 Through 25 Service local	0.0352	4 3	0.2936	19,532	501	Gouv. Govt.	—
		Changsha-Hengyang	48	Service direct 15 Through 25 Service local	0.0298	1 2	0.2936	40,031	689	Gouv. Govt.	—
		Hengyang-Ichang	20	Service direct 3 Through 16 Service local	0.0331	9 10	0.2936	20,810	8,452	Gouv. Govt.	—
	Shanghai-Kiangsi	Liling-Chaling	17	Service direct 16 Through 2 Service local	0.0292	—	—	12,314	—	Gouv. Govt.	La sect. de Lilling à Yuh sien n'est pas rattachée aux routes construites avec l'aide des autorités centrales The section from Liling to Yuh sien does not belong to the central-aid roads
	Changteh-Yuyang	Changteh-Taoyuan	8	Service direct 13 Through 14 Service local	0.0292	—	—	7,864	—	Gouv. Govt.	Ligne non rattachée aux routes construites avec l'assistance des autorités centrales This line does not belong to the central-aid roads
Total	—	147	—	—	—	—	157,315	—	—	—	

*Table A. — SHOWING THE PRESENT TRAFFIC CONDITIONS OF CENTRAL-AID ROADS
IN THE SEVEN PROVINCES (continued).*

Province	Route	Section	Autobus à voyageurs Passenger motor-buses			Camions à marchandises Freight motor-buses		Recettes mensuelles Av. monthly income		Exploitée par le Gouvernement ou par une Compagnie privée Operated by Government or private company	Observations Remarks
			Nomhre d'au- tobus Number of buses	Nombre de courses par jour Frequency of operation (day)	Tarif voyageurs Charges, passenger	Nombre de courses par jour Frequency of operation (day)	Tarif Tonnes- Km. Charges ton-km.	Voya- geurs Passen- gers	Marchan- dises Freight		
Honan	Kaifeng-Kwangtung	Kaifeng-Siangcheng	6	Service direct Through Service local Local	4 2 0.040	—	—	3,500	—	Gouv. Govt.	—
	Nanking-Shensi	Hwangchwan-Sinyang	8	—	0.050	—	—	5,000	—	Sous le contrôle militaire Under military control	—
	Hwangchwan-Kingfuhsien	Hwangchwan-Popiho	4	—	0.050	—	—	2,000	—	Sous le contrôle militaire Under military control	—
	Linyu-Taiho	Yuh sien-Chowkiakow	12	Service direct Through Service local Local	6 6 0.040	—	—	12,000	—	Gouv. Govt.	—
	Kaifeng Tsaochow	—	6	Service direct Through Service local Local	4 2 0.040	—	—	8,000	—	Gouv. Govt.	—
	Nanking-Chowkiakow Line Hwai-Yang-Pohsien	Nanyang-Luyi	18	Service local Local	18 0.040	—	—	10,000	—	Gouv. Govt.	—
Total			54	—	—	—	—	40,500	—	—	—
Total général Grand total			667	—	—	—	—	463,419	—	—	—

The following table is an analysis of operating revenue and expenses of bus services in Chekiang Province :

- (1) Ticket fare, 25-28 cents per passenger-kilometre.
- (2) Bus capacity, 17-26 persons.
- (3) Operation revenue, about 28 cents per bus-kilometre.
- (4) Operation expense, 22 cents per bus-kilometre distributed into the following items :

	%
General overhead expenses	7.0
Bus and station service	30.5
Petrol	31.0
Engine oil	3.5
Tyres and tubes	10.5
Upkeep and repairing of vehicles	8.5
Depreciation of vehicles	1.5
Road maintenance	4.0
Bonus	3.5
Total	100.0

10. As the cost of motor transport must be a factor determining its more extensive use in the country, the need for the standardisation of types of vehicle and for experimenting with the various kinds of engines is clear, and also the interest taken in experimenting with various kinds of motor-engines to discover the types best adapted to the needs of the country.

There are many considerations involved, one of which is that different kinds of vehicles require different types of road. Most of the roads constructed are light roads, some of them, particularly in the north, being easily damaged by the wheels of the old-type horse-carts. This has led to a movement, now happily abandoned, to prohibit the use of roads to all but motor-cars. But to build roads suited to fairly heavy or very heavy trucks requires a considerable capital outlay and a heavy maintenance cost. In view of all these considerations, certain of the provinces—*e.g.*, Kwangsi, one of the southern areas and one of the first to push forward with road-building—have regretted that railways were not built when the movement was initiated, and seriously considered the possibility of running horse-drawn coaches on the roads so as to stimulate traffic, now restricted to a very few cars, which are rapidly deteriorating. The need for horse-drawn vehicles is being emphasised by several provinces, including those of the north-west, where horses are available.

The Roads Bureau has included in its programme for 1934 the study of the various types of vehicles—mechanically propelled, horse-drawn, and also adapted to the possibilities of human traction assisted by mechanical devices.

11. The road-building programme of the National Economic Council for 1934 is as follows :

The Seven Provinces Highway Scheme described above is to be continued, and, as a result of the road-building operations scheduled for the year, some 4,800 kilometres of motor-road will be incorporated into the inter-provincial highway system. A start is also to be made in extending this system to other provinces, and in 1934 it is proposed for this purpose to build 691 kilometres of highway. Roads will also be built in Shensi and Kansu in connection with the programme for rehabilitation of the north-west. One of these is the Lanchow-Kulang section of the Lanchow-Suchow route and another the Sian-Hanchung route. It is proposed also to complete the improvement of the highway between Sian and Lanchow. In view of the general importance of this highway, the National Economic Council has made arrangements with the two provinces for operating a bus service between Sianfu and Lanchow, and an appropriation has been set aside for the purpose in the budget. This road, stretching from Sianfu, the capital of Shensi, and Lanchow, the capital of Kansu, represents an important sector of an historic highway connecting Central China with the populous areas of Central Asia and beyond. It is along this route that the silk caravans were despatched to Asia Minor for trade with the Western world.

Owing to the distressed state of the province, it is proposed that the Council should, in this case, depart from its usual custom of lending 40 per cent of the cost of road construction and should itself bear all the expense.

It is intended that the National Economic Council should co-operate with the provincial Governments in the appointment of the principal officer in a province in charge of road maintenance. The National Economic Council agrees to pay a part of the salary of these officers and proposes to make appropriations in the budget accordingly. Offices for supervising the construction of the inter-provincial highway are also being maintained by the National Economic Council in the Provinces of Hupeh and Kiangsi.

The plan of railway extension contemplates the prolongation in some distant future of the Lunghai railway so as to connect with the Central Asiatic railway system, and

through it with Europe. But the intervening gap runs into thousands of miles, and motor-vehicle services will no doubt be in operation long before the railway link is finally completed.

From January 1932, the Roads Bureau had at its disposal in its technical work the services of a representative of the Communications and Transit Organisation of the League, in the person of M. M. S. Okecki, Ministerial Adviser to the Ministry of Public Works at Warsaw.

12. The co-operation of the Communications and Transit Organisation for 1934 is contemplated in the study of the main problems set forth by the Roads Bureau, the importance of which has been pointed out above. These include : (a) the best type of roads adapted to selected areas ; (b) methods of operating the roads ; (c) questions of fuel supplies ; (d) type of vehicles and engines. The relevant technical documentation will be brought to Geneva by the Chinese delegation to the International Road Congress, and the members of this delegation will examine, with the members of the Technical Committees or individual specialists invited by the Transit Organisation, the several questions under investigation. Such a study would precede the despatch to China of such experts with an international experience as it may in consultation be found advisable to invite to visit China during next autumn.

On the other hand, the Communications and Transit Section will be requested to arrange facilities at various technical institutes and establishments for experimental study by Chinese engineers, specially commissioned for the purpose, of several questions arising out of the general problem set out above, particularly in regard to fuels and engines.

Table B. — AUTOMOBILE CENSUS OF CHINA AS AT JANUARY 1ST, 1933.

Compiled by A. Viola Smith, Trade Commissioner, United States Department of Commerce, Shanghai.

District	Passenger cars		Motor-buses		Motor-trucks		Motor-cycles		Total	
	1933	1932	1933	1932	1933	1932	1933	1932	1933	1932
Anhui Province	—	25	—	65	—	50	—	nil	—	140
Anking, Tungchang, Chien-shan and Taihu	—	—	23	—	5	—	nil	—	28	—
Pochow and vicinity	—	—	—	—	10	—	nil	—	10	—
Wuhu, Ningkwo, Taising..	2	—	10	—	nil	—	nil	—	12	—
Hsu Hsien, Lingpi Hsien and Sgi Hsien	—	—	6	—	nil	—	nil	—	6	—
Hopei Hsien (Luchow) ...	8	—	20	—	10	—	2	—	40	—
Shucheng	1	—	nil	—	10	—	—	—	11	—
Charhar Province	7	—	32	—	81	—	—	—	120	—
Dolonnor	—	6	—	4	—	—	—	1	—	11
Hsuanhua	—	4	—	—	—	—	—	—	—	4
Kalgan	—	8	—	59	—	—	—	—	—	67
Chekiang Province	240	216	320	349	70	102	17	50	647	717
Fukien Province :										
Amoy City	40	52	14	14	35	36	11	6	100	108
Outside Amoy	—	98	287	247	—	58	—	4	287	407
Foochow City	63	—	37	—	6	—	—	—	106	—
Outside Foochow	18	76	288	320	6	4	15	15	327	415
Hong-Kong	2,305	2,086	175	170	656	590	334	415	3,470	3,261
Honan Province	40	17	113	45	11	109	—	101	164	181
Hopei Province :										
Paoting and other areas...	28	19	61	6	40	—	2	—	131	25
Peiping City	1,808	1,415	87	50	39	55	47	15	1,981	1,535
Outside Peiping	—	300	—	10	—	—	—	5	—	315
Tientsin City	1,700	1,740	100	100	70	75	120	115	1,990	2,030
Hunan Province	4	3	285	142	7	33	3	4	299	182
Hupei Province :										
Hankow City	552	415	—	181	120	120	14	10	686	726
Other areas	18	—	116	—	4	—	1	—	139	—
Jehol Province	12	30	8	120	45	100	—	—	65	250
Kansu Province	7	10	15	40	17	Included in buses	—	1	39	51
Kiangsi Province	36	13	121	82	39	11	3	1	199	107
Kiangsu Province :										
Northern Kiangsu	—	1,000	—	65	—	550	—	15	—	1,630
Tungchow and Haimen districts	250	—	—	—	2	—	9	—	261	—
Tai Hsien and Tai Hsing-Hsien	10	—	—	—	—	—	4	—	14	—
Shaopeh, Tsingkiangpu, Sukien, Haichow	27	—	13	—	2	—	3	—	45	—
Southern Kiangsu :										
Nanking City	820	1,150	50	45	270	375	65	15	1,205	1,585
Nanking unregistered military cars	—	550	—	—	—	—	—	50	—	600
Chinkiang and vicinity ..	339	—	37	—	18	—	6	—	400	—
Shanghai area :										
Chinese Municipality..	47	12	51	107	39	26	16	16	153	161
French Concession	4,750 ¹	3,849 ¹	36	36	1,430 ¹	866 ²	149	117	6,365	4,868
Carried forward	13,132	13,094	2,305	2,257	3,042	3,160	821	956	19,300	19,376

¹ Excepting certain cases of duplicate registration.

² A total of 283 military and naval vehicles are operating in the International Settlement. No details are available as to categories ; thus, figures are arbitrary estimates.

Table B. — AUTOMOBILE CENSUS OF CHINA AS AT JANUARY 1ST, 1933. (Continuation).

District	Passenger cars		Motor-buses		Motor-trucks		Motor-cycles		Total	
	1933	1932	1933	1932	1933	1932	1933	1932	1933	1932
<i>Brought forward</i>	13,132	13,094	2,305	2,257	3,042	3,160	821	956	19,300	19,376
International Settlement	6,395 ¹	6,162	164	120	1,823 ¹	1,815	782	804	9,164	8,901
Military vehicles, unregistered	33	50	—	—	200	150	50	50	283 ²	250
Kwangsi Province	117	77	79	87	34	14	4	7	234	185
Kwangtung Leased Territory :										
Dairen City	527	—	69	—	208	—	120	—	—	—
Outside areas	223	733	13	67	169	330	355	475	1,684	1,605
Unregistered military trucks	—	—	—	—	1,000	—	—	—	1,000	—
Kwangchow-Wan French : Leased Territory	76	76	31	20	4	4	1	1	112	101
Kwangtung Province :										
Canton City	1,405	1,207	195	115	180	180	154	150	1,934	1,652
Hainan Island	439	410	47	47	178	178	2	2	666	637
Swatow City	27	58	8	12	5	6	3	15	43	91
Outside Swatow area	12	10	93	73	6	19	1	2	112	104
Other areas	573	400	31	31	296	169	73	63	973	663
Kweichow Province	1	—	66	50	Included in buses		—	—	67	50
Macao : Portuguese Colony..	195	195	50	50	5	5	35	35	285	285
Manchuria (exclusive of Jehol) :										
Harbin district (North Manchuria)	1,300	2,070	750	1,616	95	130	50	50	2,195	3,866
Mukden district (South and Central Manchuria).	1,880	1,557	150	264	1,200	1,730	250	75	3,480	3,626
Mongolia	3	—	5	—	37	—	—	—	45	—
Ninghsia Province	—	—	25	25	—	—	—	—	25	25
Shansi Province	40	—	242	—	168	—	10	—	460	—
Taiyuanfu	—	50	—	150	—	—	—	—	—	200
Tatung	—	63	—	25	—	—	—	—	—	88
Other districts	—	50	—	50	—	—	—	3	—	103
Shantung Province :										
Chefoo Consular district ..	24	43	10	4	8	72	6	23	48	142
Tsinan Consular district ..	199	191	209	257	46	23	6	6	460	477
Tsingtao Consular district ..	651	600	104	102	142	128	112	95	1,009	925
Wei-hai-wei district	16	See Chefoo	30	See Chefoo	—	—	3	—	49	—
Shensi Province	2	24	188	199	Included in buses		—	12	190	235
Sinkiang Province	10	1	—	—	40	43	—	—	50	44
Suiyuan Province	15	—	27	—	11	—	—	—	53	—
Hsipaotou	—	1	—	12	—	—	—	—	—	13
Kweihua	—	3	—	3	—	—	—	—	—	6
Other districts	—	66	—	80	—	—	—	—	—	146
Szechuan Province	164	151	282	170	15	78	17	15	478	414
Yunnan Province	9	8	8	8	20	25	5	3	42	44
Yunnanfu	—	—	—	—	—	—	—	—	—	—
Outside areas	5	—	9	—	7	—	—	—	21	—
GRAND TOTAL	27,473	27,350	5,190	5,894	8,939	8,259	2,860	2,751	44,462	44,254

¹ Excepting certain cases of duplicate registration.

² A total of 283 military and naval vehicles are operating in the International Settlement. No details are available as to categories ; thus, figures are arbitrary estimates.

Tableau C. — EVALUATION DES FRAIS DE CONSTRUCTION DES ROUTES INTERPROVINCIALES DANS LES SEPT PROVINCES.

Table C. — ESTIMATED COST OF CONSTRUCTION OF THE INTER-PROVINCIAL HIGHWAYS IN THE SEVEN PROVINCES.

Province	Longueur à construire Length to be constructed (km.)	Evaluation des frais de construction (non compris les travaux de terrassement) Estimated cost of construction (excluding earthwork) \$	Somme devant être fournie par le Conseil Amount to be extended by the Council \$
Kiangsu	349	1,872,400	621,000
Chekiang	798	4,229,000	1,258,000
Anhwei	414	1,705,600	487,200
Kiangsi	1,399	2,831,900	962,800
Hupei	594	2,370,900	888,400
Hunan	303	1,074,900	430,000
Honan	384	1,396,400	438,600
Crédits — Provision Fund	—	—	414,000
Total général — Grand total	4,241	15,481,100	5,500,000

Tableau D. — EVALUATION DES FRAIS DE CONSTRUCTION DES ROUTES INTERPROVINCIALES DANS D'AUTRES PROVINCES POUR L'ANNÉE 1934.

Table D. — ESTIMATED COST OF CONSTRUCTION OF THE INTER-PROVINCIAL HIGHWAYS IN OTHER PROVINCES FOR THE YEAR 1934.

Route	Section	Longueur en km. Length in km.	Nature des travaux Description of work	Coût par km. Cost per km.	Evaluation des frais de construction (non compris les travaux de terrassement) Estimated cost of construction (excluding earthwork) \$	Sommes devant être avancées par le Conseil Amount of loans to be extended by the Council \$
Nanping-Kianshan	* Nanping-Fengling	234	Infrastructure, ponts et ponceaux Roadbed, bridges and culverts	\$ 3,600	\$ 842,400	\$ 337,000
Lishui-Kienou	* Kienou-Patu	137	Infrastructure, ponts et ponceaux Roadbed, bridges and culverts	3,600	493,200	197,300
Nanping-Changting	Nanping-Changting	320	Infrastructure, ponts et ponceaux Roadbed, bridges and culverts	3,600	1,152,000	460,800
Crédits — Provision Fund	—	—	—	—	—	304,900
Total général — Grand Total	—	691	—	—	2,487,600	1,300,000

Nota : Pour l'évaluation des frais de construction des sections de la province de Chekiang concernant les lignes marquées d'un astérisque, voir Tableau C.

Note : The estimated construction costs of the sections in Chekiang Province for the lines marked with an asterisk are included in Table C.

Tableau E. — EVALUATION DES FRAIS DE CONSTRUCTION DES PRINCIPALES ROUTES DES PROVINCES DU NORD-OUEST.

Table E. — ESTIMATED COST OF CONSTRUCTION OF THE IMPORTANT HIGHWAYS IN THE NORTH-WESTERN PROVINCES.

Route	Section	Longueur Length (km.)	Nature des travaux Description of work	Coût par km. Cost per km.	Coût total de construction Total cost of construction
Sian-Lanchow ...	Sian-Lanchow ..	780	Travaux d'amélioration Improvement works	\$ 500	\$ 390,000
Lanchow-Suchow	Lanchow-Kulang	200	Infrastructure, ponts et ponceaux Roadbed, bridges and culverts	1,500	300,000
Sian-Hanchung	Sian-Chikiachai	150	Infrastructure, ponts et ponceaux Roadbed, bridges and culverts	800	120,000
	Chikiachai-Hanchung ...	300	et autres travaux d'amélioration and other improvement works Infrastructures, ponts et ponceaux Roadbed, bridges and culverts	2,500	750,000
Total général — Grand total ...		1,430		—	1,560,000

Tableau F. — EVALUATION DES FRAIS DE CONSTRUCTION POUR LES TRAVAUX D'AMÉLIORATION DE SURFACE DES PRINCIPALES ROUTES POUR L'ANNÉE 1934.

Table F. — ESTIMATED COSTS OF CONSTRUCTION FOR THE IMPROVEMENT OF ROAD SURFACE ON IMPORTANT HIGHWAYS FOR THE YEAR 1934.

Désignation des routes Name of highways	Section	Longueur Length (km.)	Evaluation des frais d'amélioration Estimated cost of improvement	Sommes devant être avancées par le Conseil Amount of loans to be extended by the Council
Nanking-Hangchow	Kujung-Liyang.....	105	\$	\$
	Ishing-Tungtang.....		113,930	50,000
Shanghai-Hangchow	Minhang-Kinszenianchiao	46	220,000	100,000
	Kinszenianchiao-Chapu	21	100,000	50,000
Total général — Grand total		172	433,930	200,000

Chapter VII.

HEALTH.

1. In April 1931, a programme for the development of the Central Health Service during a period of three years was drawn up by the National Health Administration and communicated to the League's Health Committee in May 1931. It formed the basis of active and continuous co-operation between the National Service and the International Organisation.

The essentials of the three-year plan consisted of :

(a) The establishment of the Central Field Health Station and the development of the Central Hospital as a nucleus of the National Medical and Health Services, this station to operate within selected regions with regard to all major problems of sanitation, preventive medicine and medical relief ;

(b) The creation of an Experimental Medical School and the enforcement of the few existing national medical colleges of the higher type for the training of suitable officers for later work ;

(c) The gradual extension of the National Quarantine Service ;

(d) The co-ordination of the various modern centres of public health activities in the country.

2. As the three-year period terminates at the end of this month, the manner in which the programme was carried out may now be examined.

A. The Central Field Health Station began to operate in temporary quarters from May 1931. For its work to be efficient, a competent staff and adequate material and laboratory facilities were required. Training was given in practical matters of public health, of epidemic control, of sanitary engineering, midwifery and nursing to thirty-four medical officers, sixty-four sanitary inspectors, some hundred midwives and fifty nurses. The work that awaited them was more than could be coped with. The Yangtze flood of 1931, the cholera epidemic of 1932 which spread to 300 cities in twenty provinces, Red Cross work during the period of hostilities, as well as increasing demands for organisers from provinces and municipalities, absorbed the personnel as soon as it was available. Up to the end of 1933, the League gave facilities to twenty-five members of the station and the affiliated organisations for study abroad qualifying them for teaching and directing responsible posts after their return home.

The production of vaccines and sera was developed in Peiping and Nanking, the output being 25,000 litres of an approximate market value of \$1,000,000. Essential drugs were produced at the headquarters in Nanking for public hospitals and dispensaries to the value of \$100,000.

Plague, malaria and parasitic diseases were taken as subjects for careful study at specially equipped departments and field stations at headquarters and in eight provinces and thirty-five localities (in Chekiang, Kiangsu, Honan, Shensi, Hupeh, Anhwei, Hopei and Shantung). Health centres were established at twenty places

in six provinces. Midwifery schools and maternity centres were opened at ten places in seven provinces. A special workshop was rapidly built for the mass production of health propaganda exhibits, of which 1,315,000 were produced to the value of \$82,000.

Adequate laboratory facilities were provided in the new building. The detailed elaboration of its plans had taken almost a year, and the construction another twelve months. The building, which compares favourably with any of this type, was completed in August 1933, and by October of the same year all its parts were in full operation. The total cost of the building and equipment was about \$600,000.

B. The Central Hospital was started in temporary wooden buildings in January 1930. The plans for the permanent building were finally approved in the spring of 1931. The construction started in September 1931, and in spite of four months' interruption during the Japanese war in 1932, the new imposing building was completed and the new clinics opened in June 1933. It has a capacity of 340 beds, a large out-patient department, and a centralised operating section. During 1933, 71,527 out-patients and 5,347 in-patients (making 77,645 hospital days) were attended and 3,220 surgical operations performed. A School of Nursing and a Central Midwifery School are attached to the hospital. Through a system of internship, 108 young doctors were trained for service in public hospitals and clinics. The total cost of the hospital, including equipment, was \$1,200,000.

C. The Quarantine Services which were inaugurated in July 1930, following consultations arranged by the League with a special international committee representing the Public Health services of the chief maritime countries and delegates of the International Chambers of Shipping, had operated in 1931 in six ports with a technical staff composed of nineteen officers. At present, the volume of the work at Shanghai, Wuhan, Amoy, Takutangku, Tientsin and Chingwangtao has greatly increased and the service expanded to twenty-four trained officers, of whom seven had benefited from facilities offered by the League at various ports in adjacent regions, and also in Europe and the United States.

D. The participation in field activities in the country is manifested by public health work in nine provinces and thirty-five localities.

The Central Field Health Station had to undertake also the preparation of sera and vaccines for the control of animal disease in response to urgent demands from the north-western provinces, which, in the last two years, suffered the loss of 2,500,000 head of cattle and sheep.

Financial stringency prevented the creation of the new medical school and active measures for the improvement of medical education.

The headquarters and field work is being carried out on a modest annual appropriation of \$500,000. The Health Service participates in the work of other branches of the National Economic Council. Thus it ensures medical and epidemiological supervision in connection with road-building and relief measures. But, above all, it performs a truly pioneering service in rural districts, where the need of its manifold activities is felt more acutely than in many other countries. Where constructive rural rehabilitation encounters grave political, administrative and financial difficulties for its realisation, the health and maternity centre, the welfare of the child, the centre of contagious disease and medical relief can be and are brought into play rapidly, efficiently, and economically by a devoted and competent staff.

Dr. B. Borcic continues to be closely associated with the technical activity of the central station. Dr. Stampar's inspiring field surveys give new significance to the conception of rural reconstruction, and meet with particular appreciation from the leaders of the National Economic Council.

Chapter VIII.

EDUCATION.

1. The programme of collaboration transmitted by me to the Secretary-General on December 30th, 1933, contained the following proposal :

“ The Ministry of Education requested the League to send an authority on education to discuss the practical application of the proposals made by the Education Commission despatched to China two years ago by the International Institute of Intellectual Co-operation, and of the Chinese group which paid a return visit to Europe in 1932. The Ministry desired the League, in making its selection, to choose a person who would be prepared to act as a permanent liaison officer in Europe between China and the International Institute of Intellectual Co-operation. The duties of this officer would be to prepare technical studies for Chinese educational authorities visiting Europe ; to seek out experts at the request of the Chinese Government for advising on particular educational reforms in China ; and in particular to guide the studies abroad of Chinese students. The Council suggested that someone should be selected who had had experience in adapting educational policy to a general comprehensive policy of industrial reconstruction.”

This request was communicated by the Secretary-General to the International Committee on Intellectual Co-operation, and this Committee appointed M. Fernand Maurette, assistant director of the International Labour Office, who came to Nanking for consultation in March 1934.

2. M. Maurette held numerous conferences with the officers of the Ministry, the Chairman and members of the National Commission on Intellectual Co-operation as well as with educational authorities designated by the Ministry. In the light of these various consultations, the Ministry of Education presented to the National Economic Council a proposal for establishing jointly an Employment Bureau for Intellectual and Technical Workers. This proposal was adopted on March 26th, 1934, and a credit was appropriated permitting an early start to be made.

The Bureau will be directed by a Committee under the auspices of the Education Sub-Committee of the National Economic Council and composed of representatives of the Ministries of Education, of Industry, of the Interior, of Railways and of Communications, and of the various commissions created to administer the funds of the Boxer Indemnity.

The function of the proposed bureau, which will be established at the Ministry of Education, will be chiefly as follows :

(a) It shall first undertake, in several selected provinces, a general and thorough investigation as to their immediate or eventual requirements in intellectual workers of different kinds, administrators, officials, various technicians and members of the liberal professions. This investigation must be general —i.e., it must extend to all public or private institutions or organisations likely

to supply the Bureau with useful information. It must be thorough—*i.e.*, it must have regard, not only to the number of positions to be filled and the general and professional category to which they belong, but also to the precise profession and the qualifications required of the candidates by reason of the technical conditions of the profession and the regional, social and other conditions of the places where such professions are to be practised. The investigation will enable the Bureau to compile a complete, exact and detailed list of the different positions in each province dealt with, to be filled either immediately or at a not-too-distant date. This list must be constantly kept up to date by means of regular correspondence with the various organisations and institutions who have helped to compile it.

(b) The Bureau shall have as its second task, which is a corollary of the first, to endeavour to find first in China itself disengaged intellectual workers capable of filling certain of the positions indicated on the list. In short, the Bureau must be a sort of Labour Exchange for Chinese intellectual workers living in China.

Another important function of the Bureau is to guide the education of Chinese abroad to enable them to utilise their university and post-graduate studies for obtaining practical training adapted to the needs of the reconstruction programme. For this purpose, the Bureau will have a branch at Geneva, with which M. Maurette will be associated. Arrangements are also being contemplated for extending the work of the Bureau to the United States of America.

3. During his short stay, M. Maurette obtained information as to the measures taken by the Ministry of Education for the reform of educational practice since 1932. He will accordingly present a report to the International Committee for Intellectual Co-operation. This document will, in due course, come before the Council of the League.

Chapter IX.

RECAPITULATION OF CHAPTERS II TO VIII.

1. In describing the project of the National Economic Council for 1934, it was necessary to discuss the economic conditions which had determined the work undertaken. It may therefore be convenient to state the budget in a summary form, and also the main details of the programme.

2. The allocation of funds which was described above is as follows :

	\$
Roads	6,800,000
Health	500,000
Cotton	1,000,000
Silk	750,000
Kiangsi	1,900,000
North-west	2,500,000
Grant to the Geological Survey for studies of fuel .	100,000
Economic research	200,000

To this there is to be added :

For a subsidy to tea experimental stations . . .	64,000
For general administration and technical experts .	750,000
For reserve	<u>436,000</u>
Total	15,000,000

3. In rather more detail, the programme is as follows :

Roads. — Loans to the extent of \$4,500,000 will be made to the Governments of the provinces of Kiangsu, Chekiang, Anhwei, Kiangsi, Hupeh, Hunan and Honan for the construction of certain highways needed to provide communications between all important centres in these provinces.

A further sum of \$700,000 is to be used for extending highways outside this district into neighbouring provinces.

A sum of \$800,000 is to be used for the construction of main roads in Shensi and Kansu, and a further half million for the provision of transport along those roads.

Health. — The sum of \$500,000 is to be used to provide for the activities of the Central Field Health Station, and for administrative expenses connected therewith.

Cotton. — The sum of \$1,000,000 to be used for cotton is to be spent chiefly on improving the yield of the cotton crop, by the encouragement of co-operative societies and the foundation of institutions to undertake research in technical methods and to conduct propaganda for the dissemination of knowledge of those methods.

Silk. — The sum of \$750,000 to be spent on silk is to be used for the breeding of improved varieties of silkworms, the training of sericulturists, the subvention of instruction in sericulture, and the subsidising of modern silk factories.

Kiangsi. — The allocations for the work of rehabilitation in Kiangsi Province are as follows :

For the support and extension of co-operative societies (including buying and selling co-operatives) and the establishment of a central controlling organisation at the provincial capital	\$ 500,000
For mass education, and the provision of stations for the assistance of agriculture ; also for the establishment of a model provincial hospital, and a public health laboratory	560,000
For the establishment of welfare centres in ten market towns	360,000
For emergency help to refugees and unemployed . .	300,000
For administration and reserve	190,000
Total	1,900,000

North-west. — The sum of \$2,500,000 allotted for the north-west is to be spent as follows :

	\$
For irrigation work	1,300,000
For animal husbandry	400,000
For health and veterinary services	300,000
For agricultural co-operatives	400,000
For administration and reserve	100,000

4. The programmes for silk and cotton have been entrusted to autonomous commissions, composed of representatives of organisations interested in these spheres of activity and presided over by independent chairmen. The Cotton Control Commission has the following statutory powers :

“ To direct and supervise the national cotton-growing and textile industries and to enforce measures for their control. ”

The Silk Improvement Committee has power “ to direct, supervise and regulate silk industry in China ”. In the same article of the constitution which confers upon it these powers, it is stated that “ the Silk Improvement Commission may exercise its control over the silk industry in a certain region or within a limited scope with a view to extending the control gradually to the whole country ”.

5. An advisory Committee has been formed under the Chairmanship of the Secretary-General of the Academia Sinica, and composed, in addition, of the Chief Secretary of the National Economic Council, the Director-General of the Geological Survey, and the Director of the comprehensive investigations at present being conducted for the National Government as a whole. The purpose of this Committee is to provide the National Economic Council with the technical advice of its constituent organisations. Every project will be referred to the Committee, and the Committee will also take the initiative in suggesting work which the National Economic Council should undertake.

Another function of the Advisory Committee is to co-ordinate and apportion the work of study and research represented by plans of economic reconstruction. As we have seen, a number of such problems have arisen in connection with the programme of the National Economic Council. The Advisory Committee has allotted these studies in the following manner :

Road Programme.

Investigations into fuel problems—to the Geological Survey ;

Investigations of improved roads and of the most suitable type of motor engines and vehicles—to the Roads Bureau ;

The co-operation of the League's Communications and Transit Organisation for these studies has been requested, as stated already, and Chinese technical officers will come to Geneva this summer (see page 55) for consultation as to the precise method of conducting these investigations.

Water Conservancy.

The Hydraulics Bureau is collecting documentation which will shortly be brought to Geneva, for consultation of the experts selected to visit China in the autumn of 1934 (page 42).

Cotton Commission.

The *Academia Sinica* is investigating the scheme for the establishment of a Cotton Industrial Study Institute (page 35).

Land Policy.

The Advisory Committee will appoint, and will further the work of the technical secretariat for the Commission of Three (page 32) ; in particular, the methods of aerial land survey will be investigated. The co-operation of the League is requested for the work of the technical secretariat.

General Economic Problems.

The present position and future prospects of development of *light industry*, the analysis of the effects of *tariff policy*, and the *currency policies* as effecting economic development are under investigation, both in China and abroad, by a group of Chinese economists under the general authority of the Advisory Committee. For these studies, co-operation and assistance through the League is also invited.

Chapter X.

RECONSTRUCTIVE ACTIVITY OF THE GOVERNMENT AS OUTLINED BY M. WANG CHING WEI.

1. The work of the National Economic Council, which has been described in the last chapter, is only a part of the reconstructive activity of the Government. Other parts of its programme are carried out through the agency of the technical ministries competent in their respective spheres.

A consideration of reconstructive activities of the Chinese Government would therefore be very misleading if it omitted to mention the part of the reconstruction programme with which the National Economic Council is not associated. That part has been of considerable extent, and the work already completed, carried out under exceptionally difficult circumstances, owing to the depression and the disadvantages of a disturbed political situation, has been quite considerable. Effort has been principally concentrated on the development and co-ordination of the telegraph and telephone systems. But of especial interest, because of the important consequences which may follow from it, is the beginning of a policy directed to extending the railway system and developing a Chinese inland merchant-fleet.

2. The relation between railways and roads was discussed in Chapter I. Whatever transport policy is finally found to be most advantageous, it is certain that China will have greatly to extend its railway system before a large-scale economic development can be looked for. At present, it possesses only 7,000 miles of track, 2,000 of which represents unimportant branch lines, and tracks and rolling-stock are both in a deteriorated condition. Since 1911, the construction of new lines has almost ceased.

During the last two years, the Central Government has constructed the following lines and sections of lines :

Canton-Hankow Railway. — This railway, which remained unfinished for the last twenty years, will, with the aid of a loan from the British Boxer Indemnity Fund, be completed by 1936. The line will be the main connecting line between North and South China.

Lung-Hai Railway. — This railway is being extended to Shensi and Kansu. The line will be in operation as far as Sian, the capital of Shensi, by October 1934.

Chekiang-Kiangsi-Hunan Railway. — This is a new line, built entirely by Chinese engineers. It will connect up the Yangtze provinces.

So little building has taken place during the last twenty years that the resumption is of considerable significance. In view of this, the following paragraphs,

taken from a statement issued on February 19th by the Prime Minister, M. Wang Ching Wei, President of the Executive Yuan, is of peculiar interest :

“ The construction of railways obviously necessitates the expenditure of a substantial amount of money. Realising the economic backwardness of the country, the late party leader (Dr. Sun Yat-Sen) advocated a policy of inviting foreign capital for investment in Chinese railway enterprises. That policy we adhere to, fully realising that, in order to attract such investment, we must give adequate security, at the same time maintaining the credit of the Railway Administration in regard to existing obligations. The Government therefore is paying close attention to this matter of credit. Under specific conditions, the Government will not only welcome foreign economic co-operation, but will exert all the influence within its power to safeguard the interests of its creditors. Although the Government is not in a position to repay at once the defaulted instalments of the railway loans, it is determined to make satisfactory arrangements for their adjustment, subject to proper safeguards for the protection of the mutual interests of both the railways and the creditors. During the past two years, it has devised practicable measures for the amortisation and readjustment of some of the domestic and foreign railway loan obligations. These are divided into three categories—namely, (1) railway financing, (2) obligations for railway supplies and (3) short-term loans. In the first category are included the obligations of the Tientsin - Pukow, Nanking - Shanghai, Shanghai - Hangchow - Ningpo, Taokow - Chinghua and Kaifeng - Loyang Railways. Measures for repayment have been devised, and some have already been carried out. The obligations of the Peiping-Liaoning Railway have been fulfilled according to the terms of the agreement. During these two years, the obligations for materials supplied in the past to the railways have been readjusted, and definite arrangements for settlement of obligations amounting to \$100 million have been made with the British and American creditors. The short-term loans, forming the third class, are mostly contracted from Chinese banks ; measures for their amortisation have been devised, and some have been already carried out.

“ It is true that not all the railway obligations of the Government have been so readjusted and amortised ; but, if we continue to follow the policy now being pursued, the day will come when we shall have amortised all our obligations. Foreign creditors have been criticising the Government for failure to pay off its obligations on maturity. While this failure is regretted, we wish to call the attention of our creditors to the following two points : In the first place, the failure of the Government to liquidate its obligations has sometimes been due to sudden and unexpected turns in the political situation. Such things happen, not only in China, but also in America and Europe, and we cannot blame any one party or circumstance for such failures, since their causes are complicated. For instance, with the outbreak of the world war in 1914, various foreign financial groups failed to fulfil the terms of their loan agreement entered into with the Chinese Government, with the result that construction work on several railways in this country was suspended, and, in consequence, heavy financial loss was sustained by the Government, since interest on the instalments already advanced had to be paid. While our creditors cannot be wholly blamed for this, it is also true that the blame cannot be laid entirely at the door of the Chinese Government. Again, due to the worldwide economic depression and depreciation of silver, the financial obligations of the Government have been largely increased, while, at the same time, railway revenues have considerably decreased. Since the economic depression and its various reactions are like a natural catastrophe against which

no country can offer effective resistance, it is scarcely fair to put the blame on China alone.

“ In the second place, it should be understood that the Government has no intention whatsoever of evading repayment of its matured loans, and is anxious to find ways and means of meeting its obligations ; but the first essential is a general revival of railway business. With increased revenues available, the interest of creditors will be more fully protected, and it is hoped our foreign creditors will co-operate with the Government to this end. The best proof of the determination of the Government to pay off its foreign railway obligations is afforded by the fact that, during the last two years, it has discharged a number of such obligations, thereby showing not only its desire but its ability to carry out its pledged word. If our foreign creditors realise these facts, and recognise the difficulties with which the Government is faced, their sympathetic co-operation will promote the interests of both parties.”

3. The Prime Minister's statement describes also other phases of the work of reconstruction carried out during the last two years. His account of the policy intended for developing Chinese navigation is also of great interest. It reads as follows :

“ The situation in the shipping business is a source of national humiliation, both inland and commercial shipping services being still monopolised by foreign interests. The Chinese merely operate two shipyards—the Kiangnan Dock and the Mamoi Dock—and the China Merchants' Steam Navigation Company. Though the China Merchants' Steam Navigation Company has a history of over sixty years, its business has steadily declined owing to mismanagement. There are very few shipping companies operated by private interests. Construction work requires a substantial sum of money, since every ship represents a value of several million dollars. The Government deemed it expedient to take over the China Merchants' Steam Navigation Company and convert it into a State-operated concern. The shares of the company were bought up by the Government, and a receivership committee organised to arrange for the conversion. Since being taken over by the State, the company has made considerable progress and improvement, as evidenced by the fact that, in the course of the first six months of last year (1933), its total receipts amounted in round figures to \$3,660,000, representing an increase of 30 per cent over the corresponding period of the preceding year. Simultaneously, efforts were made to repair old and dilapidated ships, warehouses and wharves, as well as to purchase new vessels, including four ocean liners for the Shanghai - Hong-Kong - Kwangtung route, and three river steamers for the Shanghai - Hankow - Ichang route. These new ships will be in service by the autumn of this year.”

4. A very important achievement of the Government has been the development of telephones and telegraphs. Most important towns in China have a telephone system, some of which are run as municipal enterprises, some by local merchants. It is, indeed, not infrequent to find a private and a municipal service competing with one another—in Chekiang, for example, where there are no less than three competing systems. The Government plans in time to transfer all telephone systems into a single national enterprise, thus eliminating overlaps. For the time being, however, it has limited its interests to an improvement of long-distance telephony. In Europe and America, local telephones are linked to one another, not directly, but through a regional centre, to which all the systems in a region are connected. In China, on the other hand, until the Government took the matter in hand, local telephones were not systematically inter-connected. The Government plans to establish a co-ordinated system for

the provinces of Kiangsu, Chekiang, Anhwei, Honan, Shantung and Hopei. With the aid of a loan from the British Boxer Indemnity Fund, it has already completed its work in Kiangsu and is preparing the extension of the work into Anhwei.

China's telegraphic communications with abroad are mainly by cable. It was therefore a considerable advantage to China to be able to revise its agreements with the big cable companies, obtaining better terms and recovering its cable rights. An outstanding feature of the year has been the opening of telegraphic wireless communication with the United Kingdom. But, though it is thus in contact with the outside world, Central China still does not possess telegraphic communication with its outlying provinces, or, except for a wireless station at Sian in Shensi, with the remote north-west. The establishment of wireless stations in Charhar, Suiyuan, Kansu and Kokonor, Ninghsia, Szechuan and Sikang, and the building of a telegraph line connecting Nanking with Szechuan and Tibet, both projected for this year, will therefore have general as well as economic importance.

5. There remains the development of aviation. The Prime Minister gives the following account of what has been achieved, and what is planned for the immediate future :

“ Let us now review the achievements of the Government in the field of civil aviation. Two air mail and passenger services are being operated, under the Ministry of Communications, by the China National and the Eurasia Aviation Corporations. Whereas, before 1933, the air services of the China National Aviation Corporation only consisted of the Shanghai - Hankow and Shanghai - Peiping routes, the efforts of the Government to develop the service have resulted in an extension to Chengtu, thereby inaugurating a new air route to Szechuan province. Moreover, the former Shanghai - Peiping service, which was later suspended, has been transformed into a coastal air service. An entirely new route—the Shanghai - Canton Airway—has also been inaugurated, and efforts are being made to open a new route from Chengtu to Kueiyang (Kueichow) and Yunnan, a test flight on this route having already been made.

“ The service operated by the Eurasia Aviation Corporation connects Shanghai with Tacheng (Sinkiang), whence it will connect with Berlin, via Soviet Russia. It is to be regretted, however, that the Shanghai - Tihua service, which had been in operation for a few months, has been suspended owing to the unsettled situation in Sinkiang province, the service now only reaching Lanchow, the provincial capital of Kansu. Plans are being made for the early resumption of the service.

“ Besides the above-mentioned air routes, the Corporation has also inaugurated several branch airways, including the Lanchow - Sining (Ninghsia), the Tihua - Ili, and Tihua - Tashkent routes. The Sian - Peiping route is already in operation, while measures are being adopted for the inauguration of a Canton - Hankow - Sian service, test flights on the Canton - Hankow section having proved successful. Commercial service on this section will be inaugurated as soon as the aerodrome in Canton is completed.”

Chapter XI.

CONCLUSIONS : METHODS PROPOSED FOR TECHNICAL COLLABORATION THROUGH THE LEAGUE.

1. In the foregoing pages an attempt has been made to present a general picture of the activity with which the various technical organisations of the League are associated. This necessitated frequent references to reports of the several foreign specialists and may perhaps lead to misapprehension as to the contribution which the League organisation can render in the work of reconstruction. The effectiveness of the services that can be rendered by foreign experts in China is circumscribed by the necessity, not only of gaining a knowledge of facts, but also of understanding their true significance, their interrelation in a country only a few areas of which are usually visited by them, and with the people with whom they can seldom establish direct relationship in view of their unfamiliarity with the language. The extreme affability and hospitality shown to the foreign expert often prevent him from realising the great effort required of his Chinese colleague in affording him all requisite information, in continually translating relevant documentation for him into a language he can understand, and the responsibility felt in the selection of the data to be made available for the common study. Even were the conditions not as complex as they are in China, in view of the co-existence in practically every sphere of public endeavour of customs and traditions appropriate to various stages of evolution of modern society, the task of the foreign expert would still be difficult if he has only his own national experience in his particular sphere of work to rely upon. He needs detailed knowledge of—or, better, actual experience in—the practice of other countries than his own, particularly such as have before them acute problems of the magnitude of those confronting the Chinese administrator and technician.

2. There are many cases in which the Chinese Government engages under contract foreign specialists for consultation of a temporary character, or for enlistment in various branches of national administration and its technical departments. The number of foreigners so employed at present is considerable, and may even increase as the process of industrialisation develops and calls for enlargement of the technical cadres. It is not suggested that the present arrangement should be modified, by which the Chinese Government may obtain advice and nominations through the office of the Technical Agent. It is, however, open to question whether it would be advisable to establish a general practice of recruiting foreign specialists through the instrumentality of the League. Such a practice would result in adding a new category of foreign expert to those already existing, particularly because the Government departments, national institutions and provincial authorities would continue to engage suitable persons either directly or through the intermediary of numerous public and private agencies with which they have habitual contacts. A tendency might develop to consider officers engaged through the League as either enjoying particular terms of tenure or having a claim to an undefined connection with the League. This might involve the League in responsibilities which the League Council would probably not desire to accept.

3. Experts coming to China under the responsibility of the League have a special rôle to fulfil. The League will, in future, continue to receive requests for their despatch, and proposals are being made for a further extension of the plan of collaboration proposed for 1934. In particular, it may be recalled that, when the National Economic Council was set up in 1931, the Chinese Government arranged with the Secretary-General for "a constant contact to be maintained between the Economic and Financial Sections of the League and the permanent organisations of the National Economic Council; and arrangements for the interchange of full statistical and other information". In the present new stage of technical collaboration, the need for the maintenance of such a contact and its proper organisation is desired at an early date.

I would present to the Secretary-General proposals to permit an ampler utilisation of the credits in the League budget for technical liaison in China (and particularly so as to include the office of the Technical Agent¹ of the Council).

The Technical Advisory Committee of the National Economic Council for economic studies and planning, composed, as stated previously, of the Secretary-General of the Academia Sinica, the Directors of the Geological Survey and of Governmental Research, and of the Chief Secretary of the National Economic Council, would find it convenient to obtain regularly from the League Nanking Office such information for its constituent institutions as was contemplated in the arrangement of 1931. The presence in the Nanking Office for certain periods of experienced senior members of one of the two Sections is particularly desirable when the National Economic Council has selected for study and planning a number of problems with a view to concrete action.

As regards experts commissioned by the technical organisations of the League, their missions should be conceived essentially as consultations in relation to clearly defined problems or groups of problems. The consultation should be preceded by requisite technical surveys and studies in China, which can best be effected by the Chinese technical and administrative authorities, institutions and individual specialists. Whenever possible, the necessary documentation should be brought to Geneva by competent Chinese technical officers before the departure of the person or persons selected for the consultation. With the adoption of such a procedure, some progress could be made on the voyage, and the duration of the mission accordingly shortened. The consultation should, as a rule, relate to a contemplated action; the choice of the consultant is of primary importance, and it should be limited to prominent specialists of international authority.

It will be found that, during the stage of specific application of plans or policies whenever representation of a League technical service may be desired for longer periods of time, such a representation should, as a rule, be entrusted to someone having intimate knowledge of the working methods of the international organisation represented and a personal experience not limited exclusively to his own country. The practical examination of new aspects, new problems and new situations attendant on the development of any action would be demanded of him, and his primary preoccupation should be how to ensure the requisite technical contact with the outside world for the success of the work with which he is associated. Enjoying special facilities for travel in China, his presence would be utilised by his Chinese colleagues for speeding up the realisation of the common plans.

4. One of the most hopeful prospects for the success of reconstruction in China lies in the manifold activities of a large number of its citizens specialised in many fields of technical work who carry on their work steadily, away from the limelight of

¹ After consultation with the Secretary-General, this office was designated, in November 1933, as the Information Office in Nanking of the Technical Organisations of the League of Nations.

publicity, in a spirit of public service and guided by the interest of accomplishment. These men, having known the disillusionments attendant on changes of political programmes and political regimes and having passed through bitter experience of calamity and war at home and of the ineffectiveness of measures of international collaboration on major issues, have now attached themselves resolutely to positive development work and some of them to the task of planning how best to build up their own country in all the present circumstances. Their background of solid technical knowledge was acquired partly in China, partly abroad. Having given a good deal of thought to the study of the working of the economic machinery of leading countries in the world, many of them have gained a remarkable—and perhaps generally unsuspected—insight into Western practice in fields of public endeavour—financial, economic, industrial, and agricultural—and often also into the philosophy underlying public policy in foreign lands. In short, China can count to-day on men with the requisite expert knowledge and clear understanding of their own technical needs and of the type of reform or improvement required. Except in some specialised domains, these men and their younger associates are capable of meeting the exigencies of a situation under favourable general conditions. But only a few have as yet shared the burden and responsibility of office, and, while their knowledge of the problems facing the leading countries and the manner in which they are met is generally accurate and at times illuminated, they have not, save in exceptional cases, had opportunities abroad for definite association in the practice of public life or of industrial enterprise, or of the application of economic policies.

5. The constitution and structure of the League's technical organisation permit of considerable elasticity, and it can therefore find adequate utilisation in further supplementing the modalities of collaboration. There is no doubt that greater emphasis should be laid on visits of Chinese specialists abroad than has hitherto been the case. At present, contacts abroad are limited mainly to diplomatists and such eminent intellectuals as are fully conversant with foreign languages. Technical contacts between men holding responsible positions in economic and public life should be multiplied and placed on an organised basis. There is available in the Secretariat of the League and at the International Labour Office a wealth of unique material and a very special technical experience accumulated during fourteen years of intense economic, social, and political re-adaptation of the world to new conditions during this period of transition from the pre-war economic and political order to that still in process of active evolution. China participates in this process perhaps more intensely than many other countries. The revolutions of 1911, 1925 and 1927 have marked various stages of this profound transformation, which started as a movement of emancipation from an obsolete internal political regime, from obsolete external conventional relationships, from obsolete customs of economic activity, social life and system of education. The present stage is marked by a search for a new structure for economic and financial development, for social transformation and a new political orientation. Certain phases of this process have been described in the preceding pages. The technical collaboration through the League should provide facilities for a close working association with men in institutions having technical responsibility in the various countries for framing and executing policies in the spheres of economic activity and economic and social reform. The following may be some of the concrete forms of this association :

(1) Systematic and planned utilisation of the archives of the Secretariat of the League and the International Labour Office under the guidance and with the experience of the members of the staff of the two institutions.

(2) Similar facilities might be arranged with the Secretariat of the Bank for International Settlements, of various national economic and planning councils, and kindred leading institutions in Europe and the United States.

(3) Technical commissions and sub-committees of the League and of the International Labour Office should invite the active participation, not only in their sessions, but particularly in their concrete studies, of Chinese specialists from among the group of men whose competence and interests have just been described.

(4) Experimental and other investigation of certain technical problems affecting Chinese reconstruction may be entrusted to leading institutions of economic and industrial study abroad, with the understanding that Chinese specialists should participate in the pursuit of these studies; the precise method would clearly depend on the nature of the question to be investigated.

(5) The practice established by the Health Organisation of giving facilities to senior technical officers of the Government for acquiring special experience with foreign services of a kindred character, if extended to other fields, would prove of distinct advantage.

(6) Arrangements recently proposed by the Ministry of Education to the International Institute of Intellectual Co-operation for the guidance of the studies of young Chinese students abroad, if properly developed, may prove of great importance.

I would beg leave to examine with the technical organisations and with the Labour Office the appropriate methods which may be recommended in relation to the various categories of problems and of individual experience. After a detailed examination of these possibilities, the technical advisory committees of the League and the Labour Office would be in a position to present concrete proposals.

* * *

6. The final decision of the Central Authorities to appropriate \$15,000,000 for the activities of the National Economic Council in 1934—three times the amount spent during the preceding two years—ought to give assistance and encouragement to provincial authorities in areas which the Government has deemed proper to select, and to afford guidance for economic activity in the few selected fields. Thus, a firm foundation has been built on which a national machinery of economic development can now be based. It was the desire to create such machinery which prompted the Government three years ago to establish the National Economic Council. The institution has had to develop under the grave conditions prevailing in China and abroad during the last three years, and it is not surprising that the form of its structure has had to be evolved in contact with the realities of the situation, which necessitated considerable elasticity in determining its constitutional position and administrative competence. Membership of its Standing Committee is accorded to holders of the most important offices in the State, who thus take under their auspices systematic study and planning, as well as the responsibility for providing credits for field activity. It is the Standing Committee which also determines proposals for technical collaboration with and through the League, which collaboration need not necessarily be limited to activities financed or directly undertaken by the Economic Council. It may and does include co-operation with any technical Ministry or commission, the requisite arrangements being made through the Standing Committee.

7. This collaboration should continue to be based on the arrangements concluded in 1931 and continued in 1933 ; it will be carried out with the elasticity permitted by the constitution of the League technical organisation and required by the changing economic and political order of the present day. It will aim at associating the national technical services of China with those engaged in a similar endeavour in other countries, and, by so doing, to contribute at the same time to strengthening the foundation and the function of national machinery for the economic development of China.

8. A survey of the economic and financial situation of China to-day was recently completed at the request of the National Economic Council by Sir Arthur Salter, who lately spent three months in China at the invitation of that Council to study economic and financial subjects. The report discusses in turn :

- China during the world depression ;
- The Chinese dollar and other currencies ;
- The drain of silver into Shanghai ;
- The balance of foreign payments ;
- The balance of trade ;
- The fall of prices ;
- Currency and currency policy as related to external and internal conditions ;
- The re-entry of foreign capital into China ;
- The budget of the Central Government and of the provinces ;
- The public indebtedness ;
- Agricultural production ;
- Industrialisation ;
- Railways ;
- Roads.

It provides abundant material on which to build up an active policy of economic development.

L. RAJCHMAN.

Nanking, April 1934.

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